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ABSTRACT

Changes in the working and personal lives of adults as a result of completing a bachelor's degree as a mature-age student were studied in Australia. Also considered were students' progress through the degree, patterns of employment while enrolled, and additional formal higher education after completing (or withdrawing from) the program. The study population consisted of people aged 25 or over who began a bachelor's degree in 1978. Information was obtained on: areas of study, enrollment patterns, external students, part-time study, self-report of academic performance, relationship between education and job, occupational level, job prospect, job satisfaction, unemployment, changes in personal development, changes in abilities, leisure time activities, and impact on marital relations. Appendices include: the questionnaire and index of aspects of study variables, a comparison of age subsamples, and a comparison of first-year withdrawers and graduate subsamples. Microfiche of the data (representing 208 pages of computer printouts) were enclosed with the report but are not included in ERIC. (SW)

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THE IMPACT OF HIGHER EDUCATION ON MATURE AGE STUDENTS

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THE IMPACT OF HIGHER EDUCATION
ON
MATURE AGE STUDENTS

Leo H.T. West, Terry Hore, Elena G. Eaton & Beverley M. Kermond

Higher Education Advisory and Research Unit

Monash University

HEARU

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The impact of higher education on mature age students

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Terry Hore
Leo West
Elena Eaton
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CHAPTER 1

INTRODUCTION

INTRODUCTION

Mature age students in higher education in Australia

1.1 While there have always been adults undertaking undergraduate degree courses in Australian universities and colleges, their numbers expanded rapidly in the 1970s. Participation by adults in higher education has continued to increase in absolute terms; the slight percentage decrease in 1984 for the universities is due to the increased participation of younger entrants (see Table 1.1). As a recent report from the OECD's Centre for Educational Research and Innovation (1985) makes clear, the mature age student phenomenon is not restricted to Australia but has occurred in most Western countries. The report states: "There are a number of indications that adult demand for, and participation in, higher education will continue to grow in the future." (p.1).

1.2 Since the middle seventies, most tertiary institutions have introduced special entry schemes for adult students (see Hore and West, 1980, Chapter 2). However this has not been the avenue through which most adults have entered. There is considerable confusion about the meaning of the term "mature age student". In some quarters, only special entry students are referred to as mature age students. Further, different age cut offs are used ("19+", "23+", "two years out of school" etc.). In this study mature age students are defined as adults aged 25 or over at the time of entering an undergraduate degree course. This is consistent with the definition adopted by the Advanced Education Council (CTEC, 1984). This boundary is completely arbitrary as the Advanced Education Council notes - "the needs of 24 year-olds cannot be distinguished from those of 25 year-olds" (p.65).

TABLE 1.1 Numbers of commencing students in selected age groups, 1978-1984

		Numbers of students (percentage)			
		1978	1980	1982	1984
(a)	Universities[1]				
	Under 25	36821 (67.3)	38308 (67.9)	36390 (64.0)	37975 (64.8)
	25 & over	17904 (32.7)	18134 (32.1)	20440 (36.0)	20625 (35.2)
	TOTAL	54725 (100.0)	56442 (100.0)	56830 (100.0)	58600 (100.0)
(b)	CAEs[2]				
	Under 25	28268 (78.6)	26857 (76.3)	27080 (73.7)	not available
	25 & over	7708 (21.4)	8243 (23.7)	9660 (26.3)	not available
	TOTAL	35976 (100.0)	35199 (100.0)	36740 (100.0)	not available

1. ABS Bulletins, University Statistics, No. 4208.0
2. ABS Bulletins, Colleges of Advanced Education Australia No. 4206.0. These figures refer to students commencing a higher education course for the first time.

1.3 Considerable research has already been carried out into the reasons why mature age students undertake higher education, the type of people they are, the special problems they face, and their academic performance (Barrett, 1976; Barrett and Powell, 1980; Isaacs 1979; Hore and West, 1980; McDonald and Knights, 1981). Little is known, however, about what happens to them following this education. Do they get better jobs? Are they changed by the experience? The present research aims to answer such questions.

Design of the questionnaire

1.4 The primary aim of this study was to look at changes in the working and personal lives of adults as a result of their having undertaken a bachelor's degree as a mature age student. A secondary aim was to investigate their

progress through the course, patterns of employment while enrolled and also whether they had undertaken any other formal higher education after completing (or withdrawing from) the course commenced in 1978. Information was also collected on a number of background variables.

1.5 A search of the literature yielded only one study of the impact of higher education on mature age students enrolled in traditional bachelor's courses (Mishler, 1983), although some studies have been carried out with adults graduating from special programs (e.g. Sosdian and Sharp, 1978). As far as we know, the only Australian study relevant to our purposes is a national study of professional socialization (Anderson and Western, 1967) but this, a longitudinal investigation, is still in progress and results pertinent to our study have not yet been published.

1.6 While the impact of higher education has been extensively studied in America, with Astin (1978) being perhaps the most well-known, these have all dealt with normal aged students. Despite some criticism of the value of a bachelor's degree - for instance Ochsner and Solmon (1979) stated that "too many college graduates, particularly from the humanities ... are unemployed and the future outlook is dim" (p.3) - the evidence overwhelmingly affirms the value of higher education in terms of employment and also personal growth.

1.7 Mishler (1983), who followed up 441 graduates aged 25 or over at the time of entering the University of Wisconsin to investigate their perceptions of the benefits of a bachelor's degree, found that a large majority experienced positive job-related changes and had also profited in other ways; Mishler concluded that:

> "While some have theorized that adults may differ in personal growth areas because they do not have the opportunities to become involved in certain college experiences ... there seems little evidence of that here ... the adults emerged with a strong sense of satisfaction reflected both in their work and personal lives" (p.229).

1.8 Drawing on these sources the following dimensions were chosen to evaluate the possible impact of higher education on mature age students:

Employment -

occupational level
job satisfaction
perception of career prospects
value of study in obtaining employment
usefulness of skills/knowledge gained in carrying out job
relatedness of job to major field of study

Personal development -

intellectual interests
dogmatism
political-economic liberalism
social liberalism
attitudes towards feminism
self esteem
life satisfaction
financial orientation
status needs
altruistic orientation
communication skills
academic ability
leadership

Social impacts -

leisure time activities
influence on marital relationships

1.9 Ideally this should have been a longitudinal study, but this would have required at least a six year period for mature age students. The compromise taken was to ask respondents to reflect about their response and try to answer as they would have before they began the course and now.

1.10 Since a secondary aim was to explore mature age students' progress through the course and further higher education, the questionnaire contained a series of items on course and work participation during the course and further education.

1.11 Background variables included sex, age, socio-economic level, marital status and field of study.

1.12 A description of the detailed relationship between the above mentioned measures and questionnaire items is provided in Appendix 1 together with a copy of the questionnaire.

Research design, including sample selection

1.13 The target population consisted of people aged 25 or over who had commenced a bachelor's degree in 1978 at first year level. 1978 was chosen because it was felt that this should have given participants enough time to have completed their courses even if they were undertaken on a part-time basis. The sample was obtained by randomly selecting institutions from three strata for the universities and four strata for the CAEs. (Originally two institutions were chosen from each stratum but this was later increased following discussions with CTEC). The target institutions are as follows:

Universities

1.	Old, capital city universities	-	Queensland, Western Australia, Tasmania
2.	New, post war metropolitan universities	-	Macquarie, Monash, La Trobe, Flinders
3.	Provincial universities	-	New England, Newcastle, James Cook

CAEs

1.	Central institutions	-	New South Wales Institute of Technology, South Australian Institute of Technology
2.	Multi-purpose metropolitan colleges	-	Chisholm Institute of Technology, Canberra CAE
3.	Regional colleges	-	Bendigo CAE, Tasmania CAE
4.	Specialist colleges	-	Cumberland College of Health Sciences, Melbourne CAE

1.14 Each of the these institutions was contacted by the Chairman of the AV-CC and their cooperation requested. They were also approached by the Higher Education Advisory and Research Unit (HEARU) and contact persons

identified. Because of the time which has elapsed since student records were compiled, there was considerable difficulty in obtaining up-to-date addresses. In some cases institutions were unwilling to release the names and addresses of students. Where possible addresses were checked against such sources as electoral rolls and telephone directories to make them as accurate as possible.

Procedures followed

1.15 Participating institutions were given the option of choosing a method of contacting the students which was satisfactory to them. Numbers, not names, were entered on a file for each institution so that respondents could be checked off in order to eliminate the need for a follow-up questionnaire. The numbered questionnaires were sent out by HEARU or the institution, depending on method chosen by the institution. The returned questionnaires were treated anonymously, and although participants were given the opportunity to provide their names and addresses for possible further contact, there was no compulsion to do so.

1.16 Questionnaires, marked with the identifying number of the institution, together with the individual number of the participant, were mailed out to members of the target group. A letter was also sent explaining the project, and assuring participants that their confidentiality would be respected. Completed questionnaires were returned to HEARU where they were coded for data entry and their numbers crossed off the master list. After 6 - 8 weeks, participants who had not responded to the original mail out were sent a second questionnaire and explanatory follow up letter.

Representativeness of the sample

1.17 Response rates for each institution and the overall response rate are shown in Table 1.4. Although Cumberland College sent out the questionnaires, none were returned and therefore this institution is not included in Table 1.4 Overall the response rate was 39 percent of possible responses and 34 percent of the target sample. This low rate occurred despite detailed updating of addresses (as explained above), and is a perennial problem of studies that follow-up students six or so years later.

1.18 In order to check the representativeness of the sample, comparisons are made with CTEC returns consolidated for the sample institutions. It was possible to extract from these the age, sex and attendance mode. These are compared with the sample in Tables 1.2 and 1.3 for universities and CAEs.

TABLE 1.2 Comparison of respondents and CTEC data on the sample universities (percentages)

		Sample Institutions	Respondents
(a)	Sex		
	Female	52.0	59.6
	Male	48.0	40.4
(b)	Age		
	25-29	43.2	29.1
	30-39	39.1	44.2
	40 +	17.8	26.7
(c)	attendance mode		
	Full-time internal	22.2	19.5
	Other	77.8	80.5

TABLE 1.3 Comparison of respondents and CTEC data on the sample CAEs - UGI only (percentages)

		Sample institutions	Respondents
(a)	Sex		
	Female	32.2	39.5
	Male	67.8	60.5
(b)	Age		
	25-29	50.3	35.0
	30-39	35.8	46.3
	40+	13.9	18.7
(c)	Attendance mode		
	Full-time internal	20.1	19.9
	Other	79.9	80.1

1.19 The sample appears to be biased with respect to age: it is under representative of the younger (25-29) age group. This may not be surprising, since the younger adults are more likely to have changed names and addresses and so be harder to trace. The question of the unrepresentativeness of the sample is addressed below.

1.20 The validity of the above comparison may indeed be problematic. Institutions were requested to choose the sample that consisted of 1st year commencers aged 25 or over. The total numbers, however, do not always tally with 1978 CTEC statistics as can be seen in Table 1.4.

TABLE 1.4 Numbers in sample, expected sample and response rates

Institution	No. in CTEC Returns	No. provided by institution	Dead letters	Possible response	Not useable	Response N (%)
niversity of New England	1027	974	150	824	11	352 (43)
linders University	294	252	59	193	1	84 (44)
niversity of Tasmania	216	159	34	125	4	63 (50)
niversity of Newcastle	262	181	16	165	1	80 (48)
lacquarie University	1075	1066	-	1066	-	428 (40)
lonash University	557	403	63	340	3	158 (46)
niversity of Western Australia	395	204	32	172	3	73 (42)
ames Cook University	140	133	-	-	-	35 (26)
niversity of Queensland	1376	672	101	571	7	234 (41)
a Trobe University	791	400	77	323	6	201 (62)
outh Australian Institute of Technology	146	207	30	177	1	80 (45)
endigo CAE	47	146	25	121	5	69 (57)
asmania CAE	80	146	3	143	1	20 (14)
hisholm Institute of Technology	164	176	15	161	5	92 (57)
arling Downs Institute of Advanced Education	140	145	1	144	-	57 (40)
ew South Wales Institute of Technology	307	784	152	632	12	135 (21)
anberra CAE	170	859	111	848	4	191 (23)
elbourne CAE	42	121	8	113	1	32 (28)
TOTAL		7028	877	6118		2384 (39)

1.21 There may be many reasons for these variations. Some commencers may not be first year commencers; some may not have notified their age on enrolment; some, especially in the CAEs, may be the result of mergers. Some are certainly errors. From some institutions we have been contacted by students who enrolled in graduate courses, or in other years. Thus the comparison above and the associated conclusions about the bias in the preliminary response sample may not be valid.

1.22 A different check was possible for the Monash sub-sample, since the 1978 mature age first year intake was studied by Hore and West (1980).

1.23 The tables below (Tables 1.5 to 1.9) show that there were no marked differences between the sample and the Monash population on sex, enrolment status (full-time or part-time), father's occupation, or field of study. Like the national sample examined above, the Monash sample appears to underrepresent the 25-29 age group. Given this confirmation, it can probably be inferred that the sample does have this bias with respect to age.

1.24 One of the areas of possible bias is in discontinuing students - students who withdrew could be expected to be less likely to respond than those who did not. A check on this was possible at one institution (Monash) by matching Monash student records with the Monash sample. Of those who responded (161), 26 or 16.1 percent had notified the institution that they had discontinued. Of the 218 who did not respond, 38 or 21.1 percent had notified discontinuation. From this small piece of evidence, the extent of under representativeness of discontinuers in the sample does not appear to be too serious.

TABLE 1.5

SEX (%)

	Responders	Monash Population
Female	68.6	66.0
Male	31.4	34.0

TABLE 1.6

AGE (%)

	Responders	Monash Population
25-30	33.3	42.0
31-40	42.3	37.0
41-50	17.9	15.0
50+	6.4	7.0

TABLE 1.7

FULL-TIME or PART-TIME (%)

	Responders	Monash Population
Part-time	72.2	68.0
Full-time	27.8	32.0

TABLE 1.8

FATHER'S OCCUPATION (%)

	Responders	Monash Population
Non-manual	56.7	59.8
Manual	37.0	30.0
Farmer/ Farm Owner	6.3	10.1

TABLE 1.9

FIELD OF STUDY* (%)

	Responders	Monash Population
Humanities	79.0	83.7
Economics	12.6	11.0
Law	8.4	5.2

(* Population data available for these three faculties only)

1.25 Thus it would appear that the only known bias in the sample is that it underrepresents those aged 25-29.

The possible age bias and the analyses undertaken in this report

1.26 If the sample is biased with respect to age, the important question is not that it is biased, but to what extent that bias invalidates the claims made in this report. To check this the two age groups 25-29 and 30 and over were used as separate samples to repeat the major analyses of the report. The results are presented in summarised form in Appendix 2. They really need to be read after the report itself, so the details will not be discussed here. However, they show that virtually the same conclusions would be drawn from both samples. This is especially true of the "impact on the person" results which are identical for both sub-samples. There are some variations in the "impact on employment" results - but in nearly every case where there is variation the results are greater (in the sense of the claims), for the younger group. Thus if the bias does exist, it has the effect of underestimating the impact on employment.

1.27 The most likely problem of a bias is in Chapter 2, where percentages of certain groups in the total population are inferred or implied from the responding sample. An example is with the five types of mature age students. As Table 1.10 shows, the proportions of each type are different for the different age groups.

TABLE 1.10 Percentages of the types of mature age students in the age sub-samples (N=2295)

	25-29	30+	Total sample
Early school leavers	24.4	38.5	34.2
Recyclers -1	26.6	20.5	22.4
Recyclers -2	24.5	24.6	24.6
Returners	14.0	9.7	11.0
Deferrers	10.5	6.7	7.8

(Definitions of these types of mature age students are found in Section 2.2)

CHAPTER 2

THE NATURE OF MATURE AGE STUDENTS

THE NATURE OF MATURE AGE STUDENTS

2.1 In 1978 adults aged 25 or more represented 25.2 percent of students commencing bachelors degrees in Australian universities, and 31.4 percent of students commencing in Colleges of Advanced Education. This gives rise to the conventional wisdom that about one quarter of entrants to degree courses are "mature age students". This latter term often carries a connotation of unmatriculated students, of women - indeed of "bored middle-class housewives". Thus there is an impression in some quarters that roughly 25 percent of higher education places are being taken up by unmatriculated housewives who are merely "filling in time". The first set of data presented should help dispel this myth and provide valuable estimates of the types of adults enrolling in undergraduate degree courses and of some of the factors which influenced them to undertake higher education.

2.2 There are various ways in which mature age students in Australian higher education can be classified. Hore and West (1980) used one classification based on educational starting points. An adaptation of this is given below:

1. **Early school leavers** i.e. those who left school early without the qualifications required for entry to higher education.
2. **Recyclers** i.e. those who had previously completed a post-secondary qualification; this group can be further classified into two sub-groups: (1) those who are upgrading their qualifications in the same discipline; and (2) those who are studying a different discipline.
3. **Returners** i.e. those who discontinued from previous higher education and have returned or started again.
4. **Deferrers** i.e. those who qualified at school to enter higher education but who did not do so at the time.

The numbers in each of these groups among respondents to this survey are shown in Table 2.1.

TABLE 2.1 Numbers of types of mature age students

	N	%
Early school leavers	784	(34.2)
Recyclers - 1 (updating in same discipline)	514	(22.4)
Recyclers - 2 (new discipline)	564	(24.6)
Returners	253	(11.0)
Deferrers	180	(7.8)
TOTAL	2295	(100)

2.3 These differences are reflected in the method of qualifying shown in Table 2.2.

TABLE 2.2 Method of qualifying to enter higher education course

Method	Females N	%	Males N	%	All students N	%
Full time HSC	260	(21.0)	203	(19.1)	464	(20.1)
Part time HSC	152	(12.3)	91	(8.6)	244	(10.6)
Special entry scheme requiring reduced HSC	176	(14.2)	73	(6.9)	249	(10.8)
Special entry scheme requiring no HSC	208	(16.8)	201	(18.9)	410	(17.8)
Tertiary orientation program (TOP)	13	(1.1)	5	(0.5)	18	(0.8)
Part of a previous tertiary course	92	(7.4)	111	(10.5)	203	(8.8)
Other tertiary qualification	250	(20.2)	293	(27.6)	545	(23.7)
Other	87	(7.0)	84	(7.9)	171	(7.4)
TOTAL	1238	(100)	1061	(100)	2304	(100)

2.4 There are significant differences in the backgrounds of the mature age students in each of the groups noted above (2.2). Detailed data are available in the microfiche attachment (see Appendix 5). Limited summaries of some important differences are shown in Tables 2.3 and 2.4.

TABLE 2.3 Some demographic background variables: proportions for each type of mature age student

	Median Age	Female (percent)	Married (percent)	Divorced/ Separated (percent)
Early school leavers	33.8	59.5	72.8	14.8
Recyclers 1	31.6	61.8	74.3	9.4
Recyclers 2	32.5	47.2	75.2	10.3
Returners	31.0	39.5	69.5	12.9
Deferrers	29.8	48.9	67.4	13.5
TOTAL SAMPLE	32.4	54.0	72.5	12.2

TABLE 2.4 Some socio-economic background variables: proportions for each type of mature age student (percent)

	Attended state school for most of secondary education	Previous employment in either upper professional or lower professional occupations	Father's occupation level either professional or managerial	Father's occupational level either skilled or semi-skilled worker
Early school leavers	62.3	14.9	28.2	40.4
Recyclers 1	64.0	81.4	38.3	28.6
Recyclers 2	53.6	69.8	47.4	25.1
Returners	52.4	25.4	49.8	26.4
Deferrers	58.9	21.1	43.2	24.6
TOTAL SAMPLE	59.1	45.1	38.8	31.1

2.5 The predominance of females in the Early school leavers and Recyclers-1 is to be expected. One can better understand the existence of Early school leavers against the background of the expansion of secondary retention that occurred in the 1960s and 1970s (from rates of less than 10 percent in the mid 1950s to rates near 40 percent today). Adults who attended school in the 1950s were four times more likely to leave school without completing (and therefore without a tertiary entrance qualification) than today's secondary school students. This would be more so for girls than boys since their retention rates started lower and initially grew more slowly. These students are, in a real sense, educationally disadvantaged with respect to present day students (see West, 1980).

2.6 The Recyclers-1 are mostly those from professions that previously required sub-degree qualifications (diplomas in teaching, nursing, etc.) who are updating their qualifications to degrees.

2.7 Father's occupation is an often-used, though crude, index of socio-economic status. Parents' education is another index often used, but in this case, because of the big variations in ages within the sample and the increase in average educational levels achieved in the community over the last three decades, parents' education was considered less applicable. Since the students are adults, their own occupational level is also a useful index. Type of school attended, usually considered less reliable as an index, has been included in Table 2.4 for comparison.

2.8 Further comparisons of socio-economic level between mature age students and the general population of students in higher education are worth highlighting. For the latter we use two comparison groups: the distribution of fathers' occupation for all higher education undergraduate entrants in 1976 described by Anderson, Boven, Fensham & Powell (1980); and the occupational distribution of males aged 35-54 in 1971, extracted by Anderson et al. and converted by them to the categories used here. These are shown in Table 2.5.

TABLE 2.5 Some socio-economic background variables for (a) fathers of 1976 intake to higher education[1] and (b) males aged 35-54 in 1971[2]

	Percent in professional or managerial occupations	Percent in skilled and unskilled occupations
Fathers of 1976 higher education intake	39.5	24.4
Males aged 35-54, 1971	23.9	52.2

1. Based on sample survey of entrants to bachelors degrees in Universities and Colleges of Advanced Education. Anderson et al. (1980).
2. Extracted from 1971 Census, see Anderson et al., Table 1.12.

2.9 Mature age students, as a group, are slightly more representative of the community than the total intake of students (which of course includes them). Early school leavers are much more like the rest of the community than are students in general. Forty percent of them have fathers who are employed in skilled or unskilled manual occupations. Looking at their own occupations prior to undertaking the course, only 14.9 percent were in professional occupations and 25.7 percent in professional and managerial occupations. At the other extreme, the Recyclers-2 and the Returners seem to be more privileged than normal students (based on their fathers' occupations), and this is further supported by the smaller proportion who attended state schools.

Summary

2.10 The data presented here confirm, on a national scale, what has been previously shown in institutional specific studies (e.g. Hore and West, 1980). Mature age students in Australian higher education are not homogeneous. They consist of several groups of adults with quite different motivations and from quite different backgrounds.

2.11 The Early school leavers tend to come from disadvantaged backgrounds. They are far from the stereotyped "middle-class housewife", and indeed are an important part of the movement to redress the imbalance of participation of lower SES groups in higher education. Their reasons for leaving school early were not explored in this study. In an earlier study at Monash (West and Eaton, 1980) it is suggested that this group were "motivated by a lack of job or life satisfaction coupled with opportunity arising in many ways" (p.118). Their stated reasons for not completing secondary school in the first place were usually related to their being either "working class" and/or "female", and to finances. The following quotes give the flavour of many of those replies.

> "In 1956, when I left school, degree courses tended to be for the children of the wealthy, professional or otherwise notable people." [male]
>
> "In the 1950s it was generally considered sufficient education for a girl to obtain intermediate certificate (year 10). Also family circumstances would not have encouraged me." [female]
>
> "... it wasn't the thing to do. Either work in a factory or a shop, or if you were brighter, work in an office - I did." [female]
> (West and Eaton, 1980, p.117)

2.12 The Recyclers-1 are a very different group of adults. Most were already working in upper professional (20.2 percent) or lower professional (61.2 percent) occupations. Their qualifications are diplomas rather than degrees and they are now updating to a degree because of a combination of what might be called "qualifications inflation" in their profession and the need to update professional skills and competence. The majority of these are teachers, although there are nurses, librarians, accountants and counsellors among others. It would be unfair to characterize these adults as being motivated solely by credentialism. West and Eaton concluded that those mature age students:

> "... motivated by a reaction to increasing credentialism in their job situation, probably need also to be very concerned with professional improvement or intellectual stimulation before they decide to undertake a degree course". (p.101)

2.13 The Recyclers-2 are undertaking a degree course in a different discipline. About a quarter (25.4 percent) are doing it for reasons that are not related to their job; slightly more (27.7 percent) are aiming to improve their professional skills and competence. Before they began their degree, most (57.5 percent) were in jobs which they perceived either to have definite career potential or which already realised their career goals.

2.14 The Returners and the Deferrers are much smaller groups. Deferrers here refer to those who were at least 25 years of age before they took up a degree course. There have always been students who discontinue from a course and return to start again or complete it at a later time and there is no reason to believe that this group is not part of that general population. Perhaps they deferred because of financial reasons or from lack of parental encouragement. However their reasons for leaving and for returning were not specifically explored in this study. The Deferrers, like the Early school leavers, appear to be from lower socio-economic levels.

CHAPTER 3

COURSE PATTERN AND WORK PARTICIPATION DURING THE COURSE, INCLUDING ANY ADDITIONAL STUDY AFTER GRADUATION

COURSE PATTERN AND WORK PARTICIPATION DURING THE COURSE, INCLUDING ANY ADDITIONAL STUDY AFTER GRADUATION

3.1 This chapter describes the areas of study, the type of enrolment and any changes in enrolment status, full-time to part-time or vice versa. It looks at discontinuations and progress as well as involvement in paid employment while studying part-time. Finally it describes the amount and type of any study after graduation.

3.2 Where differences appear between types of mature age students (see para 2.2), between universities and colleges or between females and males, these are given in each section below.

Areas of study

3.3 Seventy-two percent of the respondents were studying in universities and 28 percent in CAEs. Of those studying at universities 64.5 percent were enrolled in the humanities, compared with 22 percent in the CAEs. The group of subjects, economics, commerce and business studies, encompassed the highest percentage of students in the CAEs (28 percent compared with 9.3 percent for similar subjects in universities). Studies in education accounted for 8.7 percent of the students in universities and 14.3 percent in the colleges, followed by science and applied science with approximately 8 percent for both sectors. About the same percentage were enrolled in engineering technology in the CAE sector (7.4 percent).

3.4 When one looks at field of study by sex it parallels the sex split for normal age students. For example more women than men are studying humanities (64 percent to 35 percent) and education (12.8 percent to 7.3 percent). More men than women are studying economics, commerce or business studies (27.8 percent men to 6.9 percent women). More men are studying law (6.1 percent: 1.6 percent) and science/applied science (11.7 to 4.5 percent).

3.5 The picture is not one of women moving into what have been

traditionally male dominated areas such as law or commerce, but it is a successful picture of an increase in the general education level of, and employment opportunities for, women. Table 4.2 in the next chapter shows the employment destination of those women who were employed in home duties before commencing higher education and demonstrates significant movement into the upper and lower professional categories.

Enrolment Patterns

3.6 In the total sample nearly half were enrolled part-time for the duration of the course (49.6 percent); 13.6 percent were enrolled full-time for the duration of the course and 18.9 percent studied the course as external students. The remainder either changed from part-time to full-time (11.7 percent) or vice versa (6.2 percent). The comparison of enrolment patterns between the two sectors are similar except for a greater percentage of CAE students studying part-time for the duration of their course (59.4 to 45.7 percent for the universities), and a higher percentage in universities studying externally (22.4 to 10 percent in CAEs). This may have been a function of the inclusion of two universities in the sample with significant involvement in external studies. While this may be so it is worthwhile to look at those studying externally to see what type of mature age student they are and their reasons for undertaking the course as an external student (see para. 3.8).

3.7 The percentages of males and females enrolled full-time, or part-time or by external study throughout the course are similar, with slightly more males using only part-time or the external mode. It is clear that more women change from part-time to full-time enrolment, and vice versa, than men. Possible explanations are given in the sections below on reasons for type of enrolment and for changes to enrolment status (para 3.11 and 3.13).

External students

3.8 Fifty-five percent of those students studying off-campus (N=442) were Recyclers and approximately a quarter were Early school leavers (26.9 percent). When the reasons for studying externally are examined the most important reason in both sectors was the "commitment to work" which prevented their presence on campus (46.8 percent). The next most important reason, "I lived too far from a campus", accounted for 24 percent overall (22.8 in universities and 30.6 in CAEs). These first two "most important" reasons were given by 70.8 percent of the respondents and indicate that circumstances forced them to choose the off-campus mode. The third most important reason for both sectors was quite different because it shows a preference for this method of study. The reason was "I preferred the freedom offered by the external mode of study". (universities 20.1 percent; CAEs 8.3 percent).

Part-time study

3.9 One question asked all those who commenced study part-time (N=1324) to give their most important reason for this decision. Overall, for both sectors, 58 percent stated that the most important reason was either "family commitments" (universities 39 percent: CAEs 32.5 percent) or "preferred to work" (universities 28 percent: CAEs 38 percent). The main reason for Early school leavers (41 percent) and Returners (42 percent) was family commitments while both groups of Recyclers opted for the preferred to work response in addition to family commitments. More men gave preferred to work than women (39 percent: 24 percent). Approximately 10 percent gave as a reason for studying part-time the inability to obtain TEAS or to live upon the TEAS allowance. More women than men (43 percent: 29 percent) gave family commitments as their most important reason. Sixteen percent of Early school leavers and 17 percent of Deferrers decided to commence part-time in order to "feel my way academically".

Paid employment and part-time study

3.10 Sixty-five percent of students enrolled part-time at universities and 83 percent of similar students in the CAEs were in full-time paid employment. Only 13.4 percent were not in some form of paid employment.

TABLE 3.1 Paid employment by sex - total sample of part-time students (N=1512)

	PAID EMPLOYMENT (Percentages)				
Sex	Full-time	Part-time	Casual	Other	Not Applicable
Female	49.9	18.3	7.8	1.0	23.0
Male	94.1	2.3	1.0	0.3	2.3

Full-time to part-time study

3.11 While only 5.5 percent of the total respondents were involved, the reasons given for this enrolment change are: first, that they accepted a job offer (25.5 percent, with universities 21.4 and CAEs 37.8 percent); secondly, 24.2 said that the workload was too great (universities 28.6 and CAEs 10.8 percent); thirdly, for CAEs, family needs were seen as a most important reason (10.8 percent against 8 percent for the universities).

3.12 Some interesting patterns emerge when one looks at this change from full-time to part-time study by gender. More men changed because of accepting a job offer (35.7 percent against 21.5 percent for women) or because of failure (11.9 to 1.9 percent). More women than men said the workload was too great (28 to 14.3 percent), and only women changed to part-time study because of the needs/preferences of the family (12 percent).

Part-time to full-time study

3.13 Although only 14 percent made this enrolment change the two factors which emerge indicate an increase in self-confidence in their ability to cope and an increased interest in, or commitment to, the course, particularly among the Early leaver group and the Returners. Women changed to full-time because of decreasing family commitments; both sexes changed because of increasing self-confidence in coping with academic work and an increase of interest in or commitment to the course. Men were more likely to change if their financial situation improved.

Progress through the course

3.14 Respondents were asked to describe their progress through the course. After the figure for the total group, the figures in brackets refer to the percentages for universites then CAEs. Ten percent (12.0:6.0) are continuing in the same institution, 4 percent (4.0:4.0) are continuing in a different institution. Eleven percent (12.2: 8.6) have deferred and 20.7 percent have discontinued permanently (19.0:24.5). Over 53 percent have graduated in the same institution (47.7:52.4) or after transferring to another institution (4.8: 4.7). Slightly more women are still continuing in the same institution (11.3 percent to 8.6 percent for men) and more men have withdrawn permanently (24 percent compared with 17.8 percent for women).

Withdrawers from the course

3.15 This section reports when the withdrawal took place, whether the discontinuation was voluntary or required by the institution and, finally, the reasons given for withdrawal.

3.16 There were only very small differences between university and college samples on when the withdrawals occurred. In the universities 73 percent withdrew without any failures (61 percent in colleges), 21.7 percent withdrew

voluntarily but with some failures (30.7 percent in the colleges) and 5.5 percent were required to discontinue because of failures (8 percent in the colleges). More Returners than any other type of mature age student discontinued after experiencing some failure; however it should be noted that 69.4 percent of withdrawers did so without failure.

3.17 Students from both sectors gave the same reasons for withdrawing. One was related to the institution, namely "workload too heavy" (universities 12.6 percent: colleges 13.6 percent); two others were "job pressure" (universities 15.2 percent and 18.2 percent for colleges) and "family commitments (universities 18.4: colleges 10.9 percent). The sexes agreed on workload but men also gave job pressure as a most important reason (22.4 to 9.8 percent for women). Women gave family commitments (23.4 percent compared with 9.2 percent for males) and health, including pregnancy (10.9 percent against 3.4 percent for men). Only 5 percent of the withdrawers stated that "financial pressure" was the most important reason. The underlying reason appears to be a lack of time to meet all the demands upon them.

Self-report of academic performance

3.18 When asked to rate their academic performance in the last year of study compared with that of their fellow students, the responses for the university and college populations are given below:

TABLE 3.2 Self-rating of performance by sector (percentages) (N=2281)

Sector	Below average	Average	Slightly above average	Well above average	Near top of class
UNIV.	5.4	30.9	31.2	20.8	11.8
CAEs	5.8	27.4	29.4	21.1	16.3

When examined by sex, 37.7 percent of women and 29.3 percent of men rated themselves as well above average or near the top of the class.

3.19 Table 3.3 shows the progressive flow chart for the 1978 cohort of entering mature age bachelors degree students, converted to a base of 1000 at beginning of the academic year. It should be noted that of the total number of withdrawers, irrespective of whether they considered themselves as "temporary" or "permanent" withdrawers, over 70 percent discontinued without any failures. Of the temporary withdrawers approximately 40 percent successfully completed the first year of study, 40 percent completed second year studies successfully and 18 percent subsequently enrolled in another course of study. Of those who said they had withdrawn permanently, 40 percent had successfully completed first year, 21 percent completed second year without failure and 18.7 percent have since enrolled in another course of study.

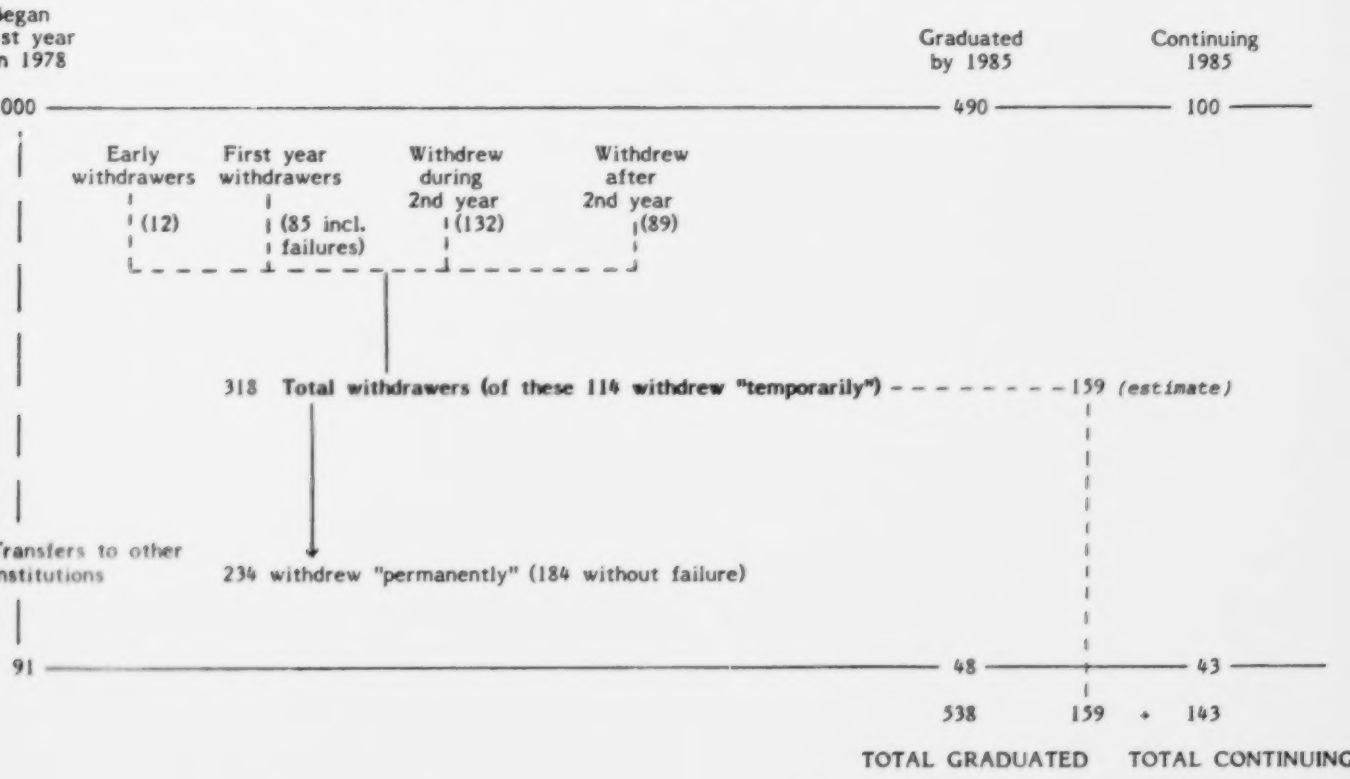
3.20 Table 3.3 shows that by 1985, 53.8 percent had graduated and 14.3 percent were still continuing. Assuming that of the 233 who withdrew without failure 100 return; say 80 are successful and assume that 80 percent of the 143 continuing students also graduate, the successful completion rate for this cohort would be over 73 percent.

Further studies

3.21 Just over one-third (34.6 percent) of respondents had undertaken further studies after completing or withdrawing from the 1978 course, and of these 37.1 percent completed the further education course. Considering that most are (or were) studying part-time, it is not surprising that almost half (46.1 percent) were currently enrolled at the time of the survey; a further 16.1 percent had withdrawn.

TABLE 3.3

Cohort flow chart: mature age students commencing first year bachelors degrees, 1978
(converted to base of 1000 commencing)



3.22 Nearly one quarter had commenced either a Masters program (22.2 percent) or another bachelor degree (23.6 percent); graduate diplomas accounted for 38.1 percent, with Dip. Ed. (11.7 percent) probably being the most popular. See Table 3.4 below for further details.

TABLE 3.4 Type of subsequent higher education course undertaken (N=743)

Type of course	Percent enrolled
Other bachelors degree	23.6
Dip. Education	11.7
Other graduate diploma	26.4
Masters	22.2
Ph.D.	2.8
Subject(s) not for degree	13.3

3.23 When asked why they had undertaken further studies, 41.2 percent indicated that their experience of higher education had whetted their appetite for more. Finding that further qualifications were needed for job-related reasons (e.g. promotion) was the next most influential factor, accounting for 26.9 percent of this group. About one quarter (25.4 percent) indicated that they had undertaken further studies because they had been unsure of their goals or capabilities when they enrolled in 1978 but these subsequently became clear. The rest (6.5 percent) said their performance in the degree course had encouraged them to enrol in an honours program and/or a higher level course.

Summary

3.24 The paragraphs above describe a successful progression to graduation. Some 74 percent are expected to graduate shortly; by 1985 over 54 percent had

already graduated. The field of study mirrors normal age student enrolment patterns and follows the existing gender biases.

3.25 More women change their enrolment status as their family commitments change, which could reflect their concern for the family and the traditional caring role. Similarly more women worked part-time, in casual jobs or in the home, than men. These observations could explain why more women than men are still continuing towards graduation.

3.26 About one third of the respondents to this survey have subsequently undertaken further studies, including 18 percent who withdrew from the course for which they were enrolled in 1978. Of those who have already graduated from their original course, over 43 percent have undertaken more study, either another bachelors degree (19 percent) or a graduate diploma (27 percent). Twenty-nine percent of the graduates have commenced either masters degrees (28 percent) or Ph.Ds. (3 percent). By the time of this survey 37 percent had completed this additional study, 46 percent were still enrolled and 17 percent had withdrawn.

3.27 When this chapter is read along with the chapters on the impact of higher education on employment and the persons themselves, the picture of success is reinforced.

CHAPTER 4

IMPACT ON EMPLOYMENT

IMPACT ON EMPLOYMENT *

4.1 The possible impacts of having undertaken higher education on the employment of mature age students were studied by examining changes on a range of dimensions. These included the occupational level, perception of job with respect to career (what we have called "job prospect"), various measures of job satisfaction, and reasons for being unemployed (if they were). These changes were determined by asking respondents to describe these aspects of their work situation both now and six months before they began their degree. The "six months before" period was used to allow for the exclusion of temporary jobs taken up to earn money before beginning the course. For the job satisfaction measures, respondents were asked to apply them to their work, whether this was paid or unpaid. Specific mention was made of being a homemaker or caring for parent etc. In addition, respondents were asked to report on the extent to which completing (or partly completing) a degree course helped them to get a job (both first job after graduation and current position), provided skills and knowledge that were useful in their job, and the extent to which the job was related to their field of study. In analysing change in this chapter, comparisons were made between the distribution of responses "before" and now".

4.2 There are problems of validity in inferring impact from change. In social science research the two threats to validity in this situation are termed maturation and history. "Maturation" means that an observed change over time may be due to the passage of time itself. "History" refers to events during the time period that may have caused the change. In order to control to some extent for maturation and history in this study, comparisons were made between those mature students who graduated and those who withdrew during first year. If changes were due to maturation and/or history, the same changes would be observed within both of these groups. If changes were related to having

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* Statistical significance levels are not quoted throughout this report - see Appendix 4 for a discussion of this issue.

undertaken a degree course, then those changes would be greater for students who graduated (and therefore stayed in higher education for at least three years) than for those who stayed for less than one year. To anticipate the results to be reported below, in every case in which a change was observed - both in employment and in personal variables - the change was greater for graduates than first year withdrawers. To draw the most conservative conclusion, some of the observed changes in every case are not due to history or maturation and so are probably due to higher education itself. For this reason we believe it is justifiable to use the term "impact".

Occupational level

4.3 Even for the whole group of mature age students, changes in occupational level "before" and "now" are dramatic (see Table 4.1). For example, there were 14.9 percent of respondents in upper professional occupations before beginning their course and 32.8 percent at the time of the survey. Significant moves in occupational level occurred for all types of mature age students. For Early school leavers, Returners and Deferrers who had relatively few people in professional or managerial occupations (25.7, 39.7, 37.1 percent respectively) the situation was improved considerably to 56.4, 73.8 and 56.8 percent respectively. Recyclers-1 and Recyclers-2 already had large numbers in professional and managerial occupations so the shifts were much smaller. However there were still substantial changes from lower professional to higher professional levels. For example, initially Recyclers-1 and Recyclers-2 had 20.2 and 33.2 percent in upper professional occupations. At the time of the survey these had changed to 34.9 and 44.6 percent respectively.

TABLE 4.1 Changes in occupational level

Occupational level	BEFORE N	%	NOW N	%
1. Upper professional	340	(14.9)	738	(32.8)
2. Lower professional	689	(30.2)	601	(26.7)
3. Large scale employer or manager	85	(3.7)	125	(5.6)
4. Small scale employer or manager	116	(5.1)	150	(6.7)
5. Intermediate non-manual worker	279	(12.2)	193	(8.6)
6. Clerical and related worker	265	(11.6)	103	(4.6)
7. Foreman and skilled worker	79	(3.5)	40	(1.8)
8. Semi-skilled worker	75	(3.3)	29	(1.3)
9. Farmer/farm owner	12	(0.5)	16	(0.7)
10. Home duties	303	(13.3)	204	(9.1)
11. Not applicable	38	(1.7)	52	(2.3)
TOTAL	2281	(100.0)	2251	(100.0)

4.4 These changes in occupational level are substantial for both females and males. At the top end there were only 9.4 percent of females in upper professional occupations before starting their course and 28.3 percent after. For males the corresponding figures are 21.9 percent and 39.5 percent. At the other end, the corresponding percentages in clerical occupations "before" and "now" were 11.3 and 5.4 for females and 12.4 and 3.9 for males. For females there is a substantial movement into the workforce by those previously involved in home duties. The occupational destinations were given for 292 of the 300 females who were involved in home duties "before" (Table 4.2). Strikingly, over 50 percent have moved to professional occupations and nearly three quarters are now in paid employment. The myth of "bored housewives" filling in time in higher education is scotched by these figures.

TABLE 4.2

Occupational levels of females in home duties before beginning their course

		N	%
1.	Upper professional	87	29.8
2.	Lower professional	61	20.9
3.	Large scale employer or manager	2	0.7
4.	Small scale employer or manager	7	2.4
5.	Intermediate non-manual worker	20	6.8
6.	Clerical and related worker	22	7.5
7.	Skilled worker	2	0.7
8.	Semi-skilled worker	5	1.7
9.	Farmer	2	0.7
10.	Home duties	78	26.7
11.	Not applicable	6	2.1
	Missing data	8	-
	TOTAL	300	100.0

Job prospect

4.5 Respondents were asked to rate their job with respect to its career prospects ("before" and "now"). The responses for the total sample are shown in Table 4.3. For most respondents, their current job either has definite career potential or realises their career goals, with the shift away from jobs that had no career prospects being quite marked; this pattern appears to be equally true for females and males.

TABLE 4.3 Rating of job prospects for job "before" and "now"

	BEFORE N	%	NOW N	%
Only a job to earn money while deciding what kind of work I really want to do	244	(11.1)	90	(4.1)
A job to earn money for something else	330	(15.0)	174	(8.0)
Only temporary until I can obtain the work I really want	142	(6.5)	132	(6.1)
It has definite career potential	699	(31.8)	661	(30.4)
It realizes my career goals	406	(18.4)	776	(35.6)
Not applicable	380	(17.3)	344	(15.8)
TOTAL	2201	(100)	2177	(100)

4.6 The differences in changes in the career prospects of job is particularly large for Early school leavers. Table 4.4 provides a summary of this by quoting the percentages of those who considered their job "realized my career goals".

TABLE 4.4 "Realizes my career goals": percentage ratings "before" and "now" for different types of mature age students

	BEFORE %	NOW %
Early school leavers	8.8	33.9
Recyclers-1	30.9	41.3
Recyclers-2	25.1	39.0
Returners	10.7	29.4
Deferrers	11.1	24.4

Job satisfaction

4.7 Job satisfaction was measured with an overall rating of "how happy were you with your work", and a rating of the job on a set of semantic differential type scales ranging from 1 to 7: dull/stimulating, routine/-challenging, unimportant/important, dependent/responsible, no stress/highly stressful. The overall rating of work "now" and "before" are shown in Table 4.5. Again, a substantial shift is observed and appears to be slightly greater for females. The overall shifts are the same for females and males (except for stress) but from different starting points. Males considered their job "before" more stimulating, challenging, and responsible; females considered their job "before" as more important than did males. In the case of work related stress, while the commencing stress levels are similar, the current job is considered to be more stressful by males than females. For the semantic differential scales, the results are shown in summary form in Table 4.6 using the median value for each scale. For the total sample, respondents perceive their work "now" as more stimulating, more challenging, more important, more responsible but more stressful than the work they had "before".

TABLE 4.5 Ratings on "how happy were you with your work"

	BEFORE		NOW	
	N	%	N	%
Most unhappy	116	(5.2)	77	(3.5)
Unhappy	267	(11.9)	155	(7.1)
O.K.	827	(36.9)	483	(22.1)
Happy	759	(33.9)	932	(42.6)
Very happy	273	(12.2)	543	(24.8)
TOTAL	2242	(100)	2190	(100)

TABLE 4.6 Ratings of work satisfaction (medians) on semantic differential scales

Scale (1 . . . 7)	Median rating BEFORE	NOW
Dull...Stimulating	4.8	5.3
Routine...Challenging	4.7	5.3
Unimportant...Important	5.4	5.8
Dependent...Responsible	5.6	6.1
No Stress...Highly stressful	4.7	5.2

4.8 In Tables 4.7 and 4.8 the work satisfaction data are summarised for the different types of mature age students. The patterns for the total sample are repeated in every group. Despite their very different work situations before they started (see Table 4.1), all groups of mature age students experienced increases in their work satisfaction and their overall happiness with their work. In most cases there was also an increase in work related stress.

TABLE 4.7 "Very happy" in their work: percentages selecting this category "before" and "now", for different types of mature age students

	BEFORE %	NOW %
Early school leavers	8.1	24.5
Recyclers - 1	17.4	27.7
Recyclers - 2	14.8	25.0
Returners	8.5	21.6
Deferrers	9.9	21.0

TABLE 4.8 Ratings of work satisfaction (medians) on semantic differential scales for different types of mature age students

(a)	Dull...Stimulating		Routine...Challenging		Unimportant...Important	
	BEFORE	NOW	BEFORE	NOW	BEFORE	NOW
Early school leavers	4.3	4.8	4.0	4.8	5.0	5.6
Recyclers - 1	5.5	5.7	5.5	5.8	6.0	6.3
Recyclers - 2	5.1	5.5	4.9	5.7	5.6	5.9
Returners	4.6	5.1	4.3	5.2	5.1	5.7
Deferrers	4.2	4.7	4.0	4.7	4.9	5.3

(b)	Dependent...Responsible		No Stress...Highly Stressful	
	BEFORE	NOW	BEFORE	NOW
Early school leavers	5.3	6.9	4.5	4.9
Recyclers - 1	6.0	6.4	5.1	5.6
Recyclers - 2	5.8	6.2	4.9	5.2
Returners	5.0	5.9	4.5	5.0
Deferrers	5.1	5.7	4.1	4.6

Unemployment

4.9 The employment patterns of respondents six months before beginning the course and at the time of the survey are given in Table 4.9. With respect to unemployment the total unemployed "now" is 11.7 percent compared with 14.9 percent "before". Of these 2.6 percent are seeking employment compared with 1.7 percent before. Among reasons given for being unemployed only 24 (6.2 percent) reported that they were "seeking work but [had] no good job offer" as a reason for being unemployed. For females the unemployed rate was much

higher (see Table 4.10). There has been a substantial drop in the percentage "unemployed, and not seeking employment", confirming earlier results showing that women have used higher education as an answer to employment. The main reasons for women being unemployed are that they are involved with home and child care (30 percent) and that they are continuing their education (19 percent).

TABLE 4.9 Type of employment "before" and "now"

Type of employment	BEFORE		NOW	
	N	%	N	%
Full time	1586	(68.9)	1686	(74.2)
Regular/permanent part time	229	(10.0)	210	(9.2)
Intermittent/casual part time	145	(6.3)	110	(4.8)
Unemployed, seeking employment	38	(1.7)	59	(2.6)
Unemployed, not seeking employment	303	(13.2)	206	(9.1)
TOTAL	2301	(100)	2271	(100)

TABLE 4.10 Type of employment "before" and "now" by sex (percentages)

Type of Employment	FEMALES		MALES	
	BEFORE (N=1237)	NOW (N=1222)	BEFORE (N=1059)	NOW (N=1044)
Full-time	50.3	59.0	90.7	92.1
Regular/permanent part-time	16.3	14.8	2.5	2.8
Intermittent/casual part-time	9.7	7.6	2.4	1.5
Unemployed, seeking employment	2.1	3.9	1.1	1.1
Unemployed, not seeking employment	21.6	14.6	3.3	2.5

Relationship between job and education

4.10 Part of the impact of education on employment should be that it helps one get a job, and helps one in the job. For the total sample about half for whom it was appropriate (49.3 percent) reported that their degree (or part degree) was either very helpful or quite helpful in getting them their first job after completing the course; 36.4 percent said it was no help. For their current job (if different) the corresponding percentages are 53.3 and 29.7 respectively. There are some marginal differences between types of mature age students, with more of the Early school leavers reporting that their education was very helpful (43.8 percent) or quite helpful (11.3 percent) in getting their first job.

4.11 Knowledge and skills acquired in their course were rated by 36.4 percent as being very useful and by 25.1 percent as being quite useful in their first job. The corresponding percentages for current job were 38.5 and 24.1 respectively. Once again the ratings were somewhat higher for the Early school leavers (e.g. 43.8 percent as very useful for first job) than the other groups of mature age students.

4.12 As was stated in a previous section (4.2) there are problems in inferring that the changes observed can be attributed to higher education itself rather than history or maturation. As anticipated in that section, a comparison was made between graduates and first year withdrawers to help resolve these questions of validity.

4.13 Comparison between the frequency distributions for graduate and first year withdrawers for the "before" and "now" job or work are included in Appendix 3, but are not quoted in full here. Instead the median values are quoted to represent the central tendency of each distribution. All the distributions quoted are ordinal in nature, and so the median is the best indicator of the central tendency. The numbers of categories are too few for the mode to be useful.

TABLE 4.11 Comparisons of the medians of various employment measures for graduates and first year withdrawers for the job/work "before" and "now" (percentages)

	Graduates		First year withdrawers	
	BEFORE %	NOW %	BEFORE %	NOW %
Occupational level	2.3	1.5	2.5	2.5
Job prospect	3.8	4.4	3.8	4.2
Dull..Stimulating	4.8	5.4	4.9	5.2
Routine..Challenging	4.6	5.5	4.9	5.3
Unimportant..Important	5.3	5.9	5.8	5.9
Dependent..Responsible	5.5	6.1	6.1	6.4
No Stress..Highly stressful	4.7	5.1	5.1	5.1
Overall happiness with work	3.4	4.0	3.5	3.9

4.14 The comparison of medians shows that in every case the change for graduates is greater than the change for first year withdrawers. It is not possible on the basis of this data to say that all of the change is due to higher education and that none is due to history or maturation. In part this is because the first year withdrawers have undertaken some higher education. However, as noted earlier, it is possible to exclude history and maturation as the total cause of the change, and so it is valid to conclude that some of the observed change is a direct result of having undertaken higher education.

Summary

4.15 From an employment perspective, it can be stated that for these mature age students undertaking higher education was very advantageous. They have markedly improved their occupational status and their job prospects, and have shown substantial increases in their work or job happiness and satisfaction. With regard to the latter they feel their work or job is more challenging, more stimulating, more responsible and more important. At the same time they find it marginally more stressful. In addition, most mature age students considered that the course they undertook was helpful in getting their job and provided them with skills and knowledge that were useful in their job. Further, over half of those women who were previously engaged in home duties are now employed in professional occupations.

4.16 There are no comparable data on a group of younger graduates against which these findings can be reflected. However, even by absolute standards, one would have to judge as highly successful the impact of higher education on the employment of ex-mature age students.

CHAPTER 5

IMPACT ON THE PERSON

IMPACT ON THE PERSON

5.1 An investigation of three broad aspects of the potential impact of higher education on mature age students as persons was undertaken. The first aspect concerned their personal development, including changes in attitudes and values; the second was to do with changes in their abilities and the third with possible social impacts. Ideally all of these potential changes should have been examined using a longitudinal design - this is especially true of the type of self report data used here. However that luxury was not available for this study, given that for mature age students it would require at least a six year period. The compromise taken was to ask respondents to reflect about their response and try to answer as they would have before they began and now. The real danger of using this approach is that respondents may reply as they think the results should be, rather than respond to each item. The results obtained provide evidence that this was not so. The patterns of results are consistent (for example, Early leavers always show the largest shifts) in ways that it would be impossible for individual responders to have conspired to achieve.

5.2 Several Likert-type scales were used to assess the impact of higher education in terms of respondents' personal development. We decided to use the five scales which were developed to measure students' attitudes in a national longitudinal study of professional socialisation (Anderson and Western, 1967). These focus on issues which can be regarded as central to higher education: a concern for, and interest in, intellectual activities, and an approach to problems that is "Flexible, abstract and theoretical." The five scales measured academic activities, intellectual interests, dogmatism, political and economic liberalism and social liberalism. Also, scales were devised to measure self esteem and attitudes towards feminism, the latter being associated with social liberalism.

5.3 The literature suggests (e.g. Astin,1978) that the experience of higher education influences students' values in terms of financial orientation (e.g. being very well off financially), status needs and altruism. Results of national surveys carried out by the American Education Council and the University of California at Los Angeles suggest that financial interests and the need for status tend to decline over time, while altruism declines where "participation in organizations like the Peace Corps" is concerned but the importance placed on "helping others in difficulty" increases (Astin, 1978). In addition a life satisfaction scale was devised to measure repondents' satisfaction with various aspects of their lives as well as life in general.

5.4 Thus for measures of personal development the following scales were used:

intellectual interests
dogmatism
political-economic liberalism
social liberalism
attitudes towards feminism
self esteem
life satisfaction
financial orientation
status orientation
altruistic orientation

The items for these scales were randomly mixed and students were asked to respond first of all to the items concerning their attitudes and values "now" and then before they began the course (see the last three pages of the questionnaire). Scores on items on the same scale are summed (after inversion of scores for negative items) to produce scale totals. This analysis was done using an adaptation of Veldman's (1967) TESTAT program. This program also produces scale and item characteristics.

5.5 Education is meant to raise the general abilities of its recipients, in addition to their development of specific skills and knowledge. Respondents

were asked to rate themselves on a series of general abilities which were then collected together into three general ability scales:

communication skills
academic ability
leadership

For both these sets of scales a small trial was conducted with 21 mature age students at Monash University. All scales appeared, even with this small sample, to be behaving well, with acceptable reliabilities and sensitivities. Details of the latter, for the final sample rather than for the small trial, are given below.

5.6 Two measures of social impact were included in the study. One was to do with general leisure time activities, with respondents being asked whether they engaged more or less in a range of activities which included things like dining out, attending concerts, participating in sport, reading books, watching television and so on. These have not been collected together into a number of scales but are left as specific activities, although they are collected together into similar groups.

5.7 The other element of social impact was the specific issue of the impact on marital relationships. Respondents were asked for their marital status before and now. They were also asked specifically about problems within their relationships and whether these were aggravated by or caused by being a student.

Scale characteristics

5.8 Scales such as those used for the personal development and self rated ability measures should display adequate internal consistencies and sensitivities (see, for example, Fraser, 1974). The relevant scale statistics are presented for all scales (rating the items for "before") in Table 5.1.

TABLE 5.1 Scale characteristics on Likert-type scales (for responses "before") (N = 2344)

Scales	Mean	s.d.	Possible Range	Cronbach's alpha
A. Personal development				
Academic interests	24.6	4.2	5-40	0.62
Intellectual interests	24.6	4.8	5-40	0.68
Dogmatism	25.6	4.0	5-45	0.55
Political-economic liberalism	31.2	5.7	5-50	0.71
Social liberalism	22.2	4.8	5-35	0.74
Attitudes towards feminism	26.1	4.5	5-40	0.60
Self esteem	27.6	5.8	5-40	0.86
Life satisfaction*	20.9	4.2	7-35	0.81
Financial orientation*	16.1	3.3	5-25	0.73
Status orientation*	15.2	3.3	5-25	0.76
Altruistic orientation*	14.8	3.3	5-25	0.73
B. Self rating of abilities				
Communication skills*	14.9	3.4	5-25	0.79
Academic ability*	7.9	2.1	5-15	0.71
Leadership*	11.3	2.6	5-20	0.76

* These scales are scored in such a way that a low score indicates a high value on the construct - hence the ranges are reversed so that they read lowest to highest on the construct.

5.9 Scale internal consistency (sometimes inappropriately called reliability) is usually measured using Cronbach's alpha (Cronbach, 1951). An alpha of 0.7 is considered good, so that nearly all of these scales have good internal consistencies. The 0.55 for the dogmatism scale is still an acceptable value. As part of this, at the individual item level, all items have positive correlations with the scale total and 85 percent of these correlations are greater than 0.5. The sensitivities of the scales are all very good. Most of the means are close to the middle of the possible range and the standard deviations are sufficiently large for the scale ranges. From a statistical point of view these are all good scales.

Changes in personal development

5.10 In Table 5.2, the means and standard deviations are shown for "before" and "now" on each of the personal development scales. As noted in an earlier footnote, statistical significance is of little value in assessing differences here because of the large sample size (see Appendix 4 for a more complete discussion). In fact, using a dependent t-test, all of the changes (except for financial orientation) in this table are statististically significant at the 0.001, or better, level. To place some better meaning on the changes, the following have been defined as degrees of change:

small - less than 0.20 of the pooled standard deviation difference

medium - 0.21 to 0.50 of the pooled standard deviation difference

large - 0.51 to 0.80 of the pooled standard deviation difference

very large - greater than 0.81 of the pooled standard deviation difference

These operational definitions are consistent with suggestions by Cohen (1969).

TABLE 5.2 Changes on personal development scales (N = 2344)

Scale	BEFORE Mean	BEFORE s.d.	NOW Mean	NOW s.d.	Direction and extent of change (proportion of pooled s.d.)
Academic interests	24.6	4.2	28.0	4.2	large increase (0.75)
Intellectual interests	24.6	4.8	26.2	4.7	medium increase (0.44)
Dogmatism	25.6	4.0	23.0	3.9	large decrease (0.67)
Political economic liberalism	31.1	5.7	31.6	6.1	small increase (0.13)
Social liberalism	22.2	4.8	23.0	4.7	medium increase (0.23)
Attitudes towards feminism	26.1	4.5	27.7	4.6	medium increase (0.46)
Self esteem	27.6	5.8	31.5	4.4	large increase (0.73)
Life satisfaction	20.9	4.2	23.0	4.1	medium increase (0.43)
Financial orientation*	16.1	3.3	16.2	3.2	small decrease (0.07)
Status orientation*	15.2	3.3	14.7	3.2	small increase (0.15)
Altruistic orientation*	14.8	3.3	14.0	3.2	medium increase (0.29)

* A smaller value on these scales indicates an increase in the construct

5.11 If small changes are discounted as insignificant in a substantive rather than a statistical sense, then it can be concluded that large changes occur in:

academic interests (increase)
dogmatism (decrease)
self esteem (increase)

and medium changes occur in:

intellectual interests (increase)
social liberalism (increase)
attitudes towards feminism (increase)
life satisfaction (increase)
altruistic orientation (increase)

5.12 The changes observed here are surely the kinds of personal developments that everyone would hope to see achieved by education. One would expect educated people to have greater academic interests, to be more open minded, to have greater self esteem, to be more interested in things intellectual, to be more altruistic in their orientation, and to be more satisfied with their life. These changes are shown separately for females and males in Table 5.3. The direction of the change was always the same; in most cases the extent of the change was greater for females.

Changes in abilities

5.13 The data for the three self rated ability scales are presented in Table 5.4. The changes here are even greater. In each case the observed change is a very large increase. This is true for both sexes, although once again the extent of change is marginally greater for females. Mature age students believe that their communications skills, their academic ability and their leadership are much greater now than before they began their 1978 course.

TABLE 5.3 Changes on personal development scales: Comparison between Females (N=1263) and Males (N=1075)

SCALE	BEFORE		NOW		Direction and Extent of Change (Proportion of pooled s.d.)	
	Mean	s.d.	Mean	s.d.		
Academic Interests						
Female	24.3	4.4	28.4	4.5	Very large increase	(0.83)
Male	24.9	4.1	27.5	4.1	Large increase	(0.65)
Intellectual Interests						
Female	25.4	4.6	27.4	4.3	Large increase	(0.52)
Male	23.7	4.9	24.8	4.9	Medium increase	(0.34)
Dogmatism						
Female	25.4	4.1	22.4	3.7	Large decrease	(0.71)
Male	25.7	4.0	23.5	3.9	Large decrease	(0.63)
Political Economic Liberalism						
Female	31.39	5.5	32.0	6.0	Medium increase	(0.20)
Male	30.9	6.0	31.1	6.2	Small increase	(0.05)
Social Liberalism						
Female	22.2	4.7	23.2	4.7	Medium increase	(0.33)
Male	22.3	4.8	22.6	4.8	Small increase	(0.14)
Attitudes towards Feminism						
Female	27.3	4.4	29.1	4.4	Medium increase	(0.47)
Male	24.7	4.2	26.0	4.3	Medium increase	(0.41)
Self Esteem						
Female	26.7	6.0	31.7	4.4	Very large increase	(0.82)
Male	28.6	5.2	31.3	4.4	Large increase	(0.61)
Life Satisfaction						
Female	20.3	4.4	23.0	4.1	Large increase	(0.51)
Male	21.5	3.8	23.0	4.0	Medium increase	(0.34)
Financial Orientation						
Female	16.4	3.3	16.5	3.2	Small decrease	(0.04)
Male	15.7	3.3	15.9	3.2	Small decrease	(0.09)
Status Orientation						
Female	15.7	3.3	14.9	3.1	Medium increase	(0.20)
Male	14.6	3.1	14.3	3.2	Small increase	(0.08)
Altruistic Orientation						
Female	14.3	3.2	13.7	3.1	Medium increase	(0.21)
Male	15.4	3.2	14.3	3.2	Medium increase	(0.38)

TABLE 5.4 Change in abilities (N = 2344)

Scale	BEFORE		NOW		Direction and extent of change (proportion of pooled s.d.)
	Mean	s.d.	Mean	s.d.	
Communication skills*	14.9	3.4	11.6	3.0	Very large increase (1.03)
Academic ability*	7.9	2.1	6.2	1.8	Very large increase (0.93)
Leadership*	11.3	2.6	9.0	2.5	Very large increase (0.87)

*A smaller value on these scales indicates an increase in the construct.

Impact of higher education: history or maturation?

5.14 A question remains (as it did in the previous chapter concerning employment) - how important are history and maturation as threats to validity for an "impact" claim? As in that case, the changes can be compared for graduates and first year withdrawers. Differences between the means are given in Table 5.5 for the scales reported above. These differences are quoted for guidance only - difference scores as such should be interpreted with care. Without trying to make too much of individual differences, the pattern is very clear. In every case where there is a change, that change is larger for graduates than for first year withdrawers. It seems valid to assume that at least some of the changes are due to the impact of higher education and not to history or maturation.

TABLE 5.5 Differences in means ("before" to "now") for graduates and first year withdrawers on all scales

Scale	Graduates N = 1239	First year withdrawers N = 227
Academic interests	4.0	1.6
Intellectual interests	1.9	0.5
Dogmatism	-3.0	-1.4
Political economic liberalism	0.7	0.4
Social liberalism	0.8	0.3
Attitudes towards feminism	1.8	0.8
Self esteem	4.4	2.7
Life satisfaction	2.3	1.8
Financial orientation	-0.1	-0.1
Status orientation	0.8	0.1
Altruistic orientation	0.8	1.0
Communication skills	3.8	1.9
Academic ability	1.9	1.2
Leadership	2.4	1.7

NOTE: Where necessary signs have been changed to make a positive difference indicate an increase in the construct.

Differential impacts on different types of mature age student

5.15 To present the above changes in the same format for each type of mature age student would require voluminous tables. For economy of space we have opted to quote the differences between the means for each type on the "before" and "now" scale scores. This use of difference scores is problematic and for any individual comparison the actual means and standard deviations should be compared. The overall pattern shown by the difference scores is, however, quite clear (see Table 5.6). In every case in which substantial changes were noted in previous sections, the change is greatest for the Early School Leavers and next largest for the Deferrers.

5.16 It is fascinating to note, however, that substantial changes still occur for the Recyclers-1, Recyclers-2 and Returners, despite the fact that these people have already attended post-secondary education.

5.17 Does this suggest that the substantial educative impacts of higher education (reported above) are more likely to occur with adults than with younger students? This is a question well worth exploring.

TABLE 5.6 Differences in means ("before" to "now") for each type of mature age student on all scales

Scale	Early School Leavers	Recyclers-1	Recyclers-2	Returners	Deferrers
Academic interests	4.3	2.9	2.8	2.9	3.3
Intellectual interests	2.6	1.1	1.0	1.0	1.4
Dogmatism	-3.4	-2.3	-2.1	-1.9	-3.1
Political economic liberalism	0.9	0.5	0.1	0.1	0.7
Social liberalism	1.1	0.6	0.6	0.3	0.7
Attitudes towards feminism	1.9	1.4	1.2	1.4	1.7
Self esteem	5.3	3.3	3.0	3.6	3.6
Life satisfaction	2.6	1.9	1.8	1.9	2.4
Financial orientation	-0.6	0.0	0.0	0.4	-0.2
Status orientation	0.6	0.8	0.2	0.7	0.3
Altruistic orientation	0.9	0.7	0.6	1.0	0.7
Communication skills	3.1	2.8	-2.8	3.0	3.2
Academic ability	2.1	1.5	1.6	1.6	1.8
Leadership	2.6	2.1	1.8	2.2	2.2

NOTE: Where necessary signs have been changed to make a positive difference indicate an increase in the construct.

Leisure time activities

5.18 Mature age students in our survey were asked whether they engaged more or less often (or at the same rate) in a wide range of leisure time activities "now" compared to the period "before" they began their studies. The results are listed in Table 5.7. This table shows the frequency distributions of the responses, together with the medians. The median provides a simple summary. A value of more than 2.0 means that the activity is engaged in less often; 2.0 shows the respondent still participates at the same rate; less than 2.0 shows an increasing frequency in the activity compared to before she/he became a mature age student.

5.19 A predictable increase in more intellectual and a decrease in less intellectual pursuits was indicated. The mature age student was more likely to be found browsing in a bookshop or library, or in an art gallery or museum. She/he was also more likely to read daily newspapers or weekly news magazines, watch non-commercial television or listen to non-commercial radio. Less favoured were commercial television and radio, popular magazines, participating in sport and watching sporting events. Respondents attended concerts and plays at the same rate as before.

TABLE 5.7 Leisure time activities compared "before" and "now"

	FREQUENCIES (percentages)				
	More often 1	About the same 2	Less often 3	Not applicable 4	MEDIAN*
Activities undertaken more often					
Browsing in bookshops/libraries	39.3	47.3	9.3	4.1	1.7
Reading books	33.4	51.6	12.6	2.4	1.8
Reading weekly news magazines	24.5	53.6	12.3	9.7	1.9
Reading daily newspapers	20.9	63.6	12.0	3.5	1.9
Visiting art galleries/museums	20.4	60.2	7.3	12.2	1.9
Listening to non-commercial radio	23.5	58.9	10.4	7.3	1.9
Watching non-commercial television	26.3	55.0	15.1	3.6	1.9
Dining out	26.3	45.8	21.0	6.9	1.9
Activities undertaken about the same					
Attending plays	16.5	54.9	12.9	15.6	2.0
Attending concerts	15.8	49.9	16.3	18.0	2.0
Activities undertaken less often					
Watching sporting events	8.3	51.7	16.1	23.9	2.1
Participating in sport	15.2	41.6	23.2	20.0	2.1
Listening to commercial radio	6.9	54.4	23.2	15.5	2.2
Reading popular magazines	3.7	39.9	28.2	28.2	2.3
Watching commercial television	5.9	48.0	37.6	8.4	2.3

*The median was calculated with the "not applicable" group excluded.

Impact on marital relations

5.20 Changes in marital status from "before" to "now" are given in Table 5.8. There is an increase in the proportion divorced/separated and a decrease in the proportion never married. More informative are the replies to a question in which respondents were asked specifically about the impact of studying on their relationship. These are shown in Table 5.9.

TABLE 5.8 Marital status, "before" and "now"

	BEFORE N	%	NOW N	%
Never married	236	(17.8)	146	(11.0)
Married	930	(70.1)	964	(72.5)
De facto relationship	57	(4.3)	58	(4.4)
Divorced/separated	103	(7.8)	162	(12.2)
TOTAL	1326	(100.0)	1330	(100.0)

TABLE 5.9 The impact of study on relationships with spouse/partner

IMPACT	Frequencies (percent of total, percent with "none of above" category removed)
My being a student ...	
• enriched my marriage/ defacto relationship	311 (23.4, 41.2)
• aggravated problems or tensions already present and my spouse/partner and I parted	107 (8.1, 14.2)
• aggravated problems or tensions already present but the marriage/relationship survived	96 (7.2, 12.7)
• caused problems or tensions in my marriage/relationship and my spouse/partner and I parted	22 (1.7, 2.9)
• caused problems or tensions but my marriage/relationship survived	218 (16.4, 28.9)
None of the above	575 (43.3, -)

5.21 Most noteworthy of these data are the number of respondents who claimed that their relationship had been enriched by their being a student. Being a student also caused problems in relationships (31.8 percent), but the vast majority (28.9 percent) survived, with only 2.9 percent parting. On the other hand, 107 (14.2 percent) reported that being a student aggravated existing problems and that their relationship ended.

5.22 A reasonable assumption might be that conflict could occur where mature age students achieve a higher occupational status than that of their spouse/partner, i.e. where the result of higher education is that students "better" themselves. Accordingly an examination was made of the responses to question 42 concerning the effect of mature age studies on a marriage/de facto relationship and question 27 concerning the occupational categories of the respondent and his/her spouse/partner.

TABLE 5.10 Impact on marriage

	BEING A MATURE AGE STUDENT -			
	Enriched marriage (percent)	Aggravated problems or caused problems - survived (percent)	Aggravated problems or caused problems - parted (percent)	
Occupation lower in status than spouse/partner	169 (51.2)	112 (33.9)	49 (14.8)	N = 330 (100.0)
Occupation equal in status to spouse/partner	107 (42.6)	107 (42.6)	37 (14.7)	N = 251 (100.0)
Occupation higher in status than spouse/partner	224 (32.7)	334 (48.8)	127 (18.6)	N = 685 (100.0)

Chi square = 34.0, $p < .0001$)

5.23 The figures show that a relationship was more likely to break down when the occupation of the mature age student was higher compared to the spouse/partner (18.6 percent) than if it were equal (14.7 percent) or lower (14.8 percent); and that a marriage was less likely to be enriched when the mature age student's occupation was higher in status than that of the partner/spouse (32.7 percent) than when it was equal (42.6 percent) or lower (51.2 percent). These trends are the same for female and male respondents.

5.24 While these figures do not support the common view that being a mature age student leads to marriage/relationship breakdowns - indeed more are enriched than threatened, it is true that for a significant minority being a student does create or aggravate problems, and for some their relationship came to an end. More importantly these problems are more frequent (and enrichment less frequent) when as a result of studying the mature age student achieves an occupational status higher than that of her/his spouse or partner.

Summary

5.25 There is surprisingly little research on the impact of higher education on students' personal development, attitudes and values, against which these data can be contrasted. In Australia, Anderson and Western are conducting a series of longitudinal studies (we chose to use some of their scales to allow for comparisons), but results do not yet seem to be available. In the United States of America, Astin (1978) reported increases in self-esteem and liberalism and decreases in business interests in college students.

5.26 To the extent that scales are comparable, his results are in the same direction as those reported here. In an extensive review of research done prior to the 1960s, Feldman and Newcomb (1969) reported reasonably consistent findings showing an increase in liberalism, self-confidence, and a decrease in dogmatism. Again these results are comparable with the findings in this study.

What are not available, unfortunately, are findings that could be quantitatively compared with those in this study, so that it is not possible to examine the relative changes in mature age and normal students. We must therefore rely on judging the changes in an absolute sense.

5.27 The impact of higher education on the adults in this study can be summarised as follows:

> very large increases in their communication skills, academic ability and leadership skills
>
> large increases in their academic interests and self esteem
>
> large decrease in their dogmatism
>
> medium increase in their intellectual interests, social liberalism, attitudes towards feminism, altruistic orientation and overall life satisfaction

These changes are stated as "impacts", because of the exclusion of history and maturation as alternative explanations.

5.28 In addition these adults following their higher education tended to engage more frequently in activities like browsing in bookshops/libraries and reading, less frequently in activities like reading "glossy" magazines and watching sport; also they watch or listen to commercial media less frequently.

5.29 These changes are for the total sample of mature age students. In most cases a similar pattern emerges for different types of mature age students. The changes are usually greatest for Early School Leavers, next largest for Returners or Deferrers, and least (but still substantial) for both types of Recyclers.

5.30 There is, of course, no universal list of the desirable outcomes of higher education with respect to personal changes, but it is hard to see that any of the above changes would not be included in most people's list. From the perspective of personal development, higher education is an extremely valuable experience for adults. This conclusion applies even when they have previously attended (and even completed) higher education.

CHAPTER 6

SUMMARY OF FINDINGS

SUMMARY OF FINDINGS

Summary

6.1 There are many kinds of mature age students. In this study five groups of students were identified, and estimates of the proportions of each of these in the 1978 intake were obtained. These groups are:

Early school leavers	(those who left school without HSC)	34.2 percent
Recyclers - 1	(those without degree qualifications upgrading to a degree)	22.4 percent
Recyclers - 2	(those with previous higher education qualifications updating in a different discipline)	24.6 percent
Returners	(those who completed only part of a higher education course who have returned)	11.0 percent
Deferrers	(those who obtained HSC but did not proceed to higher education at the time)	7.8 percent

6.2 Early school leavers tend to come from disadvantaged backgrounds. They are far removed from the stereotyped "middle class housewife", and indeed are an important part of the movement to redress the imbalance of participation of lower socio-economic groups in higher education.

6.3 The Recyclers - 1 are a very different group of adults. Most were already working in professional occupations when they began their course. Their qualifications, which they are now upgrading, were generally diplomas. The majority are teachers, although there are nurses, librarians, accountants and counsellors among others.

6.4 The Recyclers - 2 are undertaking a degree course in a different discipline. About a quarter are doing it for reasons that are related to job advancement, with another quarter aiming to improve their professional skills and competence.

6.5 The Returners and Deferrers are much smaller groups. The Deferrers, like the Early school leavers, appear to be from lower socio-economic levels.

6.6 The progress of mature age students through their courses is exemplary (especially considering that the majority of them are part-time). Of the 1978 commencers, over 54 percent have already graduated and a further 20 percent are expected to graduate shortly. Nearly 50 percent undertook the whole course with part-time status while only 14 percent were full-time status for the entire course. Women were more likely to change this status during the course, usually as a result of changes in family commitments.

6.7 Of the graduates, 43 percent have undertaken further courses - masters degrees, graduate diplomas, another bachelors degree, even a few Ph.Ds.

6.8 Somewhat surprisingly the effects on employment of having undertaken a degree were very substantial. These students had markedly improved their occupational status and their career prospects, and had shown substantial increases in their work or job happiness and satisfaction. With regard to the latter they feel their work or job is more challenging, more stimulating, more responsible and more important, but marginally more stressful. Most considered that the course they undertook helped in gaining them their job and provided them with skills and knowledge that were useful in their job. These effects were greatest, on every measure, for the Early school leavers.

6.9 With respect to personal development, higher education appears to have led to: very large increases in communication skills, academic ability and leadership skills; large increases in academic interests and self esteem and a large decrease in dogmatism; and medium increases in intellectual interests, social liberalism, attitudes towards feminism, an altruistic orientation and overall life satisfaction. In addition, these adults tended to engage more

frequently in intellectual activities (e.g. browsing in book shops, reading books, news magazines and daily papers, visiting art galleries, watching non-commercial television and listening to non-commercial radio etc.), and less frequently in activities such as watching sport, reading "glossy" magazines, watching commercial television, and so on.

6.10 These personal changes, like the employment changes noted earlier, are always greatest for Early school leavers. They are usually next largest for either Deferrers or Returners, and least (but still substantial) for both types of Recyclers.

6.11 There is no universal list of desirable outcomes from higher education, but on this set of results it seems reasonable to describe the higher education of mature age students as a success story - in their progress and performance, their personal development and their employment.

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APPENDIX 1

COPY OF QUESTIONNAIRE AND INDEX OF ASPECTS OF VARIABLES EXAMINED.

Most of the questions can be answered by circling the appropriate number.
Unless otherwise indicated, please circle one number only when answering each question.

PERSONAL DETAILS

1. Year of birth..... 1 9 [ ] [ ]

2. Sex female..... 1 male..... 2

3(a) Type of course entered in 1978
Degree (go to question 4)..... 1
Diploma (go to question 3(b))..... 2

(b) If you enrolled in a diploma course, did you update this to a degree?
Yes..... 1 No..... 2

4. What was the HIGHEST educational level obtained by
(a) yourself, at the time of entry to the course
(b) your parents
(c) your spouse/partner at the time of entry (if applicable)

	YOU	FATHER	MOTHER	SPOUSE/ PARTNER
Primary school	1	1	1	1
Some secondary school	2	2	2	2
Completed secondary school	3	3	3	3
Trade or certificate course	4	4	4	4
Post secondary diploma	5	5	5	5
Some tertiary studies	6	6	6	6
Bachelor degree	7	7	7	7
Higher degree	8	8	8	8
Don't know	9	9	9	9
Not applicable				0

5. Type of school attended during most of your original secondary education
State high school..... 1
State technical school..... 2
Catholic school..... 3
Independent, non catholic school..... 4
Other..... 5

6. Location of school attended for most of your original secondary education
Overseas..... 1
Capital city..... 2
Provincial city..... 3
Large rural town..... 4
Other rural..... 5

7. When you first returned to study, which of the following did you attend?
Living and learning community centre..... 1
State adult education centre (e.g. Council for Adult Education). 2
High school
- day classes..... 3
- evening classes..... 4

TAFE
- day classes..... 5
- evening classes..... 6
- Way-in program..... 7
- TOP..... 8

Other, please specify_____ 9

8. Your marital status - NOW and six months before you began the course

	NOW	BEFORE
Never married	1	1
Married	2	2
De facto relationship	3	3
Divorced/separated	4	4

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QUESTIONS CONCERNING YOUR ENTRY INTO THE COURSE:

9. Listed below are four categories concerning reasons for undertaking higher education (i.e. university or college of advanced education) as a mature age student. Which of these best describes you? (Please circle one number only.)

   a. I left school before completing Year 12 without the qualifications required for entry to higher education. It wasn't until later that I decided I would like to undertake a degree course..... 1

   b. I already had a post-secondary qualification (includes certificates in teaching, nursing, etc.) and I wanted to upgrade/update that qualification..... 2

   c. I already had a post-secondary qualification but wanted to study for a degree in another discipline..... 3

   d. I had discontinued from a previous higher education course and I wished to continue or start again..... 4

   e. I completed Year 12 and qualified to enter higher education but didn't do so at the time..... 5

10. What was your METHOD of qualifying for entry to the degree course?
(Please circle one number only)

- Full-time HSC or equivalent..... 1
- Part-time HSC or equivalent..... 2
- Special entry scheme requiring reduced HSC..... 3
- Special entry scheme requiring no HSC..... 4
- Tertiary Orientation Program (TOP)..... 5
- Part of a tertiary course undertaken previously..... 6
- Other tertiary qualification..... 7
- Other, please specify_____ 8

11. The following categories concern job-related reasons which might have influenced you to undertake a degree course; which best describes your own case?
(Please circle one number only)

Retraining or recertifying in:

- teaching..... 01
- nursing..... 02
- librarianship..... 03
- accounting/banking..... 04
- counselling..... 05
- other occupation, please specify_____ 06

OR Job Improvement:

- for promotion..... 07
- to improve/upgrade professional skills, competence.... 08
- to change to a better, more satisfying job..... 09
- to retrain for re-entry to the workforce..... 10

OR None of the above..... 11

QUESTIONS CONCERNING THE COURSE YOU UNDERTOOK:

12. What was your FIELD OF STUDY for the degree course commenced in 1978?
(Please circle one number only)

- Agriculture, forestry..... 01
- Architecture, building, surveying..... 02
- Arts - humanities, social science..... 03
- - visual and performing..... 04
- Dentistry..... 05
- Economics, commerce, business studies..... 06
- Education..... 07
- Engineering, Technology..... 08
- Health Sciences (para-medical)..... 09
- Law..... 10
- Medicine..... 11
- Science, Applied Science..... 12
- Veterinary science..... 13
- Other..... 14

13. How satisfied were you with the following aspects of the institution in which you were enrolled for the degree course begun in 1978?
(Please rate your level of satisfaction on the following scales in which a 1 indicates that you were very satisfied and a 6 that you were very dissatisfied.)

	Very Satisfied					Very Dissatisfied
The intellectual environment	1	2	3	4	5	6
Staff-Student relations	1	2	3	4	5	6
The quality of the instruction	1	2	3	4	5	6
Friendship with other mature-age students	1	2	3	4	5	6
Friendship with other students	1	2	3	4	5	6
Overall how satisfied were you with college/university	1	2	3	4	5	6

14. Which of the following best describes your enrolment during the course?
(Please circle one number only.)

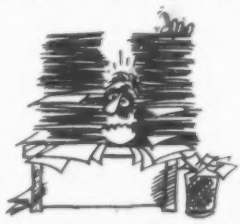
- Full time for duration of enrolment..... 1
- Started part-time but undertook some of the course full time..... 2
- Part-time for duration of enrolment..... 3
- Started full time but undertook some of the course part-time..... 4
- External student..... 5

If you circled 1 in Question 14, go to Question 20.

If you circled 2 or 3 in Question 14, go to Question 16.

If you circled 4 in Question 14, go to Question 17.

If you circled 5 in Question 14, please complete the next question (Question 15), then go to Question 20.



15. Which of the following best describes the most important reason for you undertaking your course as an external student? Please circle one number only in column 1. If there is a second most important reason, please circle one number in column 2.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
• I didn't like the idea of studying on campus	1	1
• I lived too far from a campus	2	2
• Lack of transport prevented me from attending a local campus	3	3
• Work commitments prevented me attending on campus	4	4
• It was easier to get in to the external course	5	5
• The course I wanted to do was only available externally	6	6
• I wanted to do the course without my family/friends knowing about it	7	7
• I preferred the freedom offered by the external mode of study	8	8

16. If you began your course part-time, indicate the single most important reason for this by circling one number in the first column; if there is a second most important reason, circle one number in column 2.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
I wanted to 'feel my way' academically	1	1
I was unable to get TEAS	2	2
I could not have lived on TEAS	3	3
Family commitments	4	4
I simply preferred to work	5	5
I simply preferred part-time study	6	6

17. If you were in paid employment while enrolled part-time, was that employment:

Full-time..... 1
Part-time..... 2
Casual..... 3
Other..... 4
Not applicable..... 5

18. If you changed from full-time to part-time, answer this question otherwise go to question 19. Which of the following best describes the most important reason for you changing from full-time to part-time? Please circle one number only in column 1. If there is a second most important reason, please circle one number in column two.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
Accepted job offer	01	01
Academic factors		
• waning interest	02	02
• workload too great	03	03
• difficulty with subject(s)	04	04
• failed subject(s) and catching up	05	05
• other academic, specify	06	06

18. (Continued)

Financial factors		
• lost TEAS	07	07
• found TEAS insufficient	08	08
• unexpected financial expenditure	09	09
• other financial, please specify	10	10
Personal factors		
• health, including pregnancy	11	11
• needs/preferences of family	12	12
• other personal, please specify	13	13

19. If you changed from part-time to full-time, answer this question; otherwise go to question 20. Which of the following best describes the most important reason for you changing from part-time to full-time? Please circle one number only in column 1; if there is a second most important reason, circle one number only in column 2.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
Improved financial position	1	1
Wished to qualify for TEAS	2	2
Family commitment less demanding	3	3
Lost job	4	4
Wanted to stop work	5	5
Academic factors	6	6
• confident of ability to cope with study	7	7
• increased interest in/commitment to course	8	8
• other academic, please specify	9	9

20. Which of the following best describes your progress through the course? (Please circle one number only)

• I am currently continuing with the course I began in 1978 (go to question 21)	1
• I transferred to another course and/or institution and am currently continuing with that course (go to question 21)	2
• I have withdrawn temporarily and intend to return (go to question 22)	3
• I have withdrawn permanently (go to question 22)	4
• I transferred to another course and/or institution and have graduated (go to question 23)	5
• I completed the course I began in 1978 and graduated (go to question 23)	6

21. If you are still continuing with a course, please indicate the year of the course (1, 2, 3 or 4) in which you are enrolled by writing the appropriate number in the box provided (then go to question 23). ☐

22. If you withdrew (i.e. have not transferred to another course/institution), please indicate the time of withdrawal.

• Very early - before 30 April 1978	1
• Without completing 1st year	2
• Completed 1st year, not 2nd year	3
• After completing 2nd year	4

23. Which of the following best describes you?

• I withdrew without failure	1
• I withdrew voluntarily but with some failure	2
• I was required to withdraw as a result of failure	3

24. Listed below are factors which may have influenced you to withdraw from the degree course. Which of the following best describes the most important reason for your withdrawal from the degree course? Please circle one number only in column 1; if there is a second most important reason, circle one number only in column 2.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
College/University-Related Factors:		
◦ Course failed to meet my requirements	01	01
◦ Course not relevant to career	02	02
◦ Failure	03	03
◦ Workload too heavy	04	04
◦ Problems with staff	05	05
◦ Social environment unsatisfactory	06	06
◦ General dissatisfaction	07	07
◦ Other, please specify _____	08	08
Non-College/University Factors:		
◦ Job pressure	09	09
◦ Financial pressure	10	10
◦ Home location, distance, transportation	11	11
◦ Family commitments	12	12
◦ Travel	13	13
◦ Left for a job	14	14
◦ Lack of interest, motivation	15	15
◦ Health, including pregnancy	16	16
◦ Indecision about goals	17	17
◦ Other, please specify _____	18	18

25. In general, how would you rate your academic performance in your last year of college/university compared with that of your fellow students?

Below average	1
Average	2
Slightly above average	3
Well above average	4
Near top of class	5

QUESTIONS CONCERNING YOUR EMPLOYMENT:

26. Please indicate whether your primary occupation was/is full-time or part-time (a) 6 months BEFORE you commenced the course in 1978 and (b) NOW

	BEFORE	NOW
Full-time	1	1
Regular/permanent part-time	2	2
Intermittent/casual part-time	3	3
Unemployed, seeking employment	4	4
Unemployed, not seeking employment	5	5

27. Listed below are descriptions of various categories of OCCUPATIONS, each of which is represented by a number. For A,B,C,D and E below please write the PRESENT or LAST MAIN OCCUPATION of that person.

A. Yourself - 6 months before you began	
B. Yourself - NOW	
C. Your FATHER	
D. Your MOTHER	
E. Your Spouse/Partner in 1977	

UPPER PROFESSIONAL (Generally requires a university degree or equivalent: e.g. lawyer, doctor, scientist, accountant, etc.) 01

LOWER PROFESSIONAL (Generally requires a diploma or equivalent; e.g. a journalist, librarian, nurse, etc.) 02

LARGE SCALE EMPLOYER OR MANAGER (Employs, plans, or manages about 25 or more persons, e.g. a senior public servant who is not a professional, owner of a large business, local government inspector, financial manager, etc.) 03

SMALL SCALE EMPLOYER OR MANAGER (Employs, plans, or manages an operation with fewer than 25 persons, or self-employed with a middle or higher income e.g. a shop proprietor, self-employed insurance or real estate agent, manager of a small business, etc.) 04

INTERMEDIATE NON-MANUAL WORKER (Employees having some supervisory role or skill; e.g. bookkeeper, middle level public servant, postmaster, non-commissioned officer, real estate or insurance employee) 05

CLERICAL AND RELATED WORKER (Employees without special skill or supervising responsibility; e.g. clerk, postal officer, shop assistant, commercial traveller, policeman, etc.) 06

FOREMAN AND SKILLED WORKER (Employees with specific skills, e.g. fitter and turner, plumber, other qualified technician or tradesman, etc.) 07

SEMI-SKILLED MANUAL WORKER (Employees with no or only a small amount of skill or training; e.g. driver, caretaker, medical attendant, labourer, etc.) 08

FARMER/FARM OWNER 09

HOME DUTIES 10

DON'T KNOW/NOT APPLICABLE 11

28. If you are at present unemployed or a full-time home maker, indicate the first and, if appropriate, second most important reasons for this by circling one number only in each column.

	MOST IMPORTANT REASON	SECOND MOST IMPORTANT REASON
Seeking full-time work but no good offer	01	01
Continuing my education	02	02
Voluntarily involved with home and child care	03	03
Unable to obtain adequate childcare	04	04
Family objections or preferences	05	05
No need or desire for paid employment	06	06
Health (including pregnancy)	07	07
Can't find part-time work or job with flexible hours	08	08
Temporarily unemployed due to lay-off	09	09
Have been doing volunteer work	10	10
Can't find a job without relocating	11	11
Haven't yet obtained the qualification I need	12	12
Retired	13	13
Other, please specify	14	14

29. In which employment sector was

(a) the job you had 6 months BEFORE you commenced the degree course in 1978; and

(b) the job you have NOW.

	BEFORE	NOW
PRIVATE SECTOR		
Communications	01	01
Community services (health, welfare religious institutions, etc.)	02	02
Services (includes recreation, entertainment, travel, legal)	03	03
Construction	04	04
Finance, insurance, etc	05	05
Manufacturing	06	06
Mining, petroleum, chemical	07	07
Retail/Wholesale	08	08
Transport	09	09
Other private sector	10	10
PUBLIC SECTOR		
Primary education	11	11
Secondary education	12	12
TAFE	13	13
University/CAE	14	14
Federal Public Service	15	15
State Public Service	16	16
Local government	17	17
Health	18	18
Other	19	19

30. Which of the following best describes

(a) how you felt about the job you had BEFORE you entered the course and

(b) how you feel about the job you have NOW.

(Please circle one number in each column)

	BEFORE	NOW
• Only a job to earn money while deciding what kind of work I really want to do	1	1
• A job to earn money for something else (e.g. travel, further education, extra household income)	2	2
• Only temporary, until I can obtain the work I really want	3	3
• It has definite career potential	4	4
• It realises my career goals	5	5
• Not applicable	6	6

Questions 31-33 concern work, whether paid or unpaid. If you are a homemaker, caring for parents, etc., answer with respect to that work.

31. If you worked BEFORE you commenced the degree course, how did you perceive this work?

DULL	1	2	3	4	5	6	7	STIMULATING
ROUTINE	1	2	3	4	5	6	7	CHALLENGING
UNIMPORTANT	1	2	3	4	5	6	7	IMPORTANT
DEPENDENT	1	2	3	4	5	6	7	RESPONSIBLE
NO STRESS	1	2	3	4	5	6	7	HIGHLY STRESSFUL

32. How do you perceive this work NOW?

DULL	1	2	3	4	5	6	7	STIMULATING
ROUTINE	1	2	3	4	5	6	7	CHALLENGING
UNIMPORTANT	1	2	3	4	5	6	7	IMPORTANT
DEPENDENT	1	2	3	4	5	6	7	RESPONSIBLE
NO STRESS	1	2	3	4	5	6	7	HIGHLY STRESSFUL

33. In general, how happy were you with your work?

(a) BEFORE you commenced the course and

(b) NOW?

	BEFORE	NOW
Most unhappy	1	1
Unhappy	2	2
O.K.	3	3
Happy	4	4
Very happy	5	5

34. What was your annual income (before taxes) in 1977/8 and what is your annual income NOW?
Do not adjust for inflation. Give answer to the nearest $1000.

1977/8: $_____,000

NOW: $_____,000

35. To what extent do you think the completion (or partial completion) of a degree course helped you in gaining (or retaining) employment?

	FIRST JOB (after graduation)	CURRENT JOB (IF DIFFERENT)
No help	1	1
Of some help	2	2
Quite helpful	3	3
Very helpful	4	4
Not applicable	5	5

36. How useful have the skills/knowledge gained in the course been to you in carrying out your job?

	FIRST JOB (after graduation)	CURRENT JOB (IF DIFFERENT)
Useless	1	1
Of some use	2	2
Quite useful	3	3
Very useful	4	4
Not applicable	5	5

37. Is your present job related to your major field of study?

Yes, directly related	1
Yes, somewhat related	2
Yes, indirectly related	3
No, not related	4
Not applicable	5

38. Shown below are JOB-RELATED CHANGES which could have resulted from completing, or partially completing, the degree course.

PLEASE ANSWER FOR EACH CHANGE, rating

a) the amount of change you EXPECTED, and
b) the amount of change which actually HAPPENED.

(Use the following Key: 1 = NONE; 2 = MODERATE CHANGE; 3 = SUBSTANTIAL CHANGE and place a circle around the appropriate number.)

If you expected the change but it DID NOT HAPPEN,

c) select the single most important reason for this from the possible reasons listed below (*) and write the corresponding number in column (c).

CHANGE	(a) EXPECTED None		Substantial	(b) HAPPENED None		Substantial	(c) IF EXPECTED, BUT DID NOT HAPPEN, REASON - (Choose one number only from list below)
A change to a better job	1	2	3	1	2	3	.....
A promotion, or increase in pay or benefits	1	2	3	1	2	3	.....
An increase in job security	1	2	3	1	2	3	.....
An increase in responsibilities	1	2	3	1	2	3	.....
An increase in status or respect	1	2	3	1	2	3	.....
Return to the workforce	1	2	3	1	2	3	.....

* Possible reasons for lack of expected change(s)

0 I withdrew from the course
1 The course was not relevant
2 The employer did not seem to value my degree
3 The employer was having financial problems
4 There were too many qualified applicants
5 My age
6 My sex
7 I discovered a degree does not help
8 Change in economic/employment climate
9 Personal reasons caused me to leave the workforce

39. Of all the ways you may have benefitted from completing, or partially completing, the degree course, which of the following do you feel was the most important? Please circle one number only in column 1; if there was a second most important benefit, circle one number in column 2.

	MOST IMPORTANT BENEFIT	SECOND MOST IMPORTANT BENEFIT
o The satisfaction of having a degree or part degree	1	1
o Having the degree or part degree as a credential towards job opportunities I might not otherwise have	2	2
o The enjoyment and experience of learning	3	3
o Having the degree or part degree as a 'stepping stone' to go on for more education or training	4	4
o Being more skilled and better at performing my work	5	5
o Being more effective in my family or community	6	6
o No perceived benefit	7	7
o Other, please specify _____	8	8

QUESTIONS CONCERNING ANY FURTHER HIGHER EDUCATION COURSES UNDERTAKEN:

40. Have you undertaken/commenced any formal higher education courses since completing or withdrawing from your degree course?

YES..... 1
NO..... 2

If NO, go to question 42.

(a) If YES, indicate the type of course:

Other bachelor degree..... 1
Dip. Ed..... 2
Other graduate diploma..... 3
Masters..... 4
Ph.D..... 5
Subject(s) not for degree..... 6

(b) Have you completed the course?

Yes..... 1
No, I am currently enrolled..... 2
No, I have withdrawn..... 3

(c) What was/is your enrolment status?

Full-time..... 1
Part-time..... 2

41. Which of the following statements best describes your reasons for undertaking this further higher education course? Please circle one number only.

- I found the experience of higher education so rewarding, I wanted to continue studying, either to pursue an interest in a particular field or simply to become better educated..... 1
- I performed so well in the degree course, I was encouraged to enrol in an honours program and/or a higher level course (e.g. Masters, Ph.D.)..... 2
- Having gained a bachelor degree, I found that further qualifications were needed in order to gain promotion or obtain the kind of work I wanted..... 3
- When I enrolled in the bachelor degree course in 1978 I was unsure of my goals or capabilities. It was only later that these became clear, and I decided to undertake an appropriate course..... 4

QUESTIONS CONCERNING THE DIRECT OR INDIRECT INFLUENCES OF THE COURSE (i.e. THE ONE YOU BEGAN IN 1978) ON YOU AND YOUR LIFE:

42. There has been much discussion about the impact of study by mature age students on their relationship with their spouse/partner. Please indicate which of the following statements best describes your own case.

- My being a student enriched my marriage/de facto relationship..... 1
- My being a student aggravated problems or tensions already present in my marriage/de facto relationship
  - (i) and my spouse/partner and I parted..... 2
  - OR
  - (ii) but the marriage/de facto relationship survived..... 3
- My being a student caused problems or tensions in my marriage/de facto relationship
  - (i) and my spouse/partner and I parted..... 4
  - OR
  - (ii) but the marriage/de facto relationship survived..... 5
- None of the above..... 6

43. Please indicate whether you engage more or less often in each of the following leisure time activities NOW compared to BEFORE you began your course.

	MORE OFTEN	ABOUT THE SAME	LESS OFTEN	NOT APPLICABLE
Reading daily newspapers	1	2	3	4
Dining out	1	2	3	4
Attending concerts	1	2	3	4
Participating in sport	1	2	3	4
Browsing in bookshops/ libraries	1	2	3	4
Watching sporting events	1	2	3	4
Visiting art galleries/ museums	1	2	3	4
Reading weekly news magazines (e.g. National Times, *Time*, Bulletin)	1	2	3	4
Reading popular magazines and 'glossies'	1	2	3	4
Reading books	1	2	3	4
Attending plays	1	2	3	4
Watching TV				
• commercial	1	2	3	4
• non-commercial (ABC,SBS)	1	2	3	4
Listening to				
• commercial radio	1	2	3	4
• non-commercial radio (ABC, MBS, etc.)	1	2	3	4

44. What do you think has been the major impact (of undertaking the course) on your life.

IS THAT GOOD...OF COURSE YOU CAN GO TO UNI...IF YOU PICK UP THE KIDS...CLEAN THE HOUSE...GIVE A DINNER PARTY FOR 30 OF MY CLIENTS...AND GET MY SUIT TO THE CLEANERS...

QUESTIONS ABOUT YOUR ATTITUDES AND ACTIVITIES NOW AND WHAT YOU REMEMBER YOUR ATTITUDES AND ACTIVITIES TO BE BEFORE YOU BEGAN YOUR COURSE.

In this section we give a list of statements. For each statement we want you to think of yourself NOW and BEFORE you began the course and to consider the extent to which you agree or disagree with each statement NOW and the extent to which you would have agreed or disagreed with each statement BEFORE. It will probably be easier to run down the page and answer the questions about NOW and then come back and answer them about BEFORE. In that way you won't have to keep changing your thoughts from now to then, or back again.

For the statements on this page use the following key: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree. Write the appropriate number in the box on the left hand side for NOW and write the appropriate number in the box on the right hand side for BEFORE.

NOW		BEFORE
	I am able to do things as well as most people	
	While internal censorship may not be desirable, there should be government regulations prohibiting the importation of obscene and pornographic books and materials	
	I enjoy reading essays on serious or philosophical subjects	
	I don't like things to be uncertain or unpredictable	
	For most questions there is only one right answer once a person is able to get all the facts	
	There are irreconcilable differences between the West and the Soviet Union which makes it virtually impossible for the two sides to co-exist for long	
	Retention by a wife of her maiden name is selfish and fanatical	
	I dislike spending a lot of time on any one problem	
	Although many details still remain to be worked out, we now have definite answers to the major problems in many fields	
	I often find myself questioning the statements and ideas expressed by others	
	Radical feminists do the women's movement more harm than good	
	I don't have much inclination to get to know people who hold views that are completely contrary to my own	
	The idea of engaging in research for any lengthy period of time does not appeal to me	
	It is annoying to listen to a lecturer who seems unable to make up his/her mind about what he really believes	
	I have spent a lot of time listening to serious music	
	Acceptance by women of an inferior economic status is disgraceful	
	The best way to provide adequate medical care for the entire population is through a government-run national health scheme	
	I would like to learn more about the history of human thought	
	It is a fallacy to suggest that large-scale government planning will result in any real loss of individual liberties and freedom	
	One should never trust a woman's account of other women	

NOW		BEFORE
	No matter what the modern trend is, young people should be discouraged from having sexual relations before marriage	
	I am interested in discussions about such topics as the ideal society, freedom, etc.	
	A woman should not expect to go to the same places or to have quite the same freedom of action as a man	
	I am more interested in the critical consideration of principles and theories than in their practical application	
	While not condoning censorship of the press, radio, or television, it seems clear that the mass media must be subject to some form of government supervision otherwise the national security may be endangered or our allies misrepresented	
	I enjoy reading about artistic or literary achievements	
	I feel I do not have much to be proud of	
	It is the responsibility of the government to ensure everyone a secure job and a good standard of living	
	Industrial stoppages at the present time generally result from the genuine grievances of workers. Communists and other radical elements play a relatively minor role in provoking stoppages	
	I don't like to work on a problem unless there is a good possibility of coming out with a clear cut and unambiguous answer	
	Young people should not have too easy access to books which are likely to confuse them	
	The danger of Communist infiltration into the union movement is great and the government should take whatever steps are necessary to ensure that it does not become widespread	
	A policy of positive discrimination should be vigorously pursued to ensure that women assume their rightful place in business and the professions	
	We need a system of price controls on most goods used by consumers and industry in order to prevent unjustified price increases	
	All things considered I would rather have a principle or theory explained to me than attempt to understand it on my own	
	It is quite untrue to suggest that the nationalization of industries such as steel would lead to inefficiency, bureaucracy, and stagnation	

NOW

1 Strongly disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly agree

BEFORE

- Our thinking would be a lot better if we would just forget about words like "probably", "approximately", "perhaps".
- I feel I am a person of worth, at least on an equal plane with others
- I like to read poetry
- Housewives (women) should demand money for household and personal expenses as a right rather than a gift
- All in all, I feel that I am a failure
- It is only natural that a person will have a better acquaintance with ideas he/she believes in than with the ideas he opposes
- Persons should be free to take their own lives if they wish to, without any interference from society
- The person who is extremely tolerant of widely different and even conflicting viewpoints probably has few opinions of his own
- I feel that I have a number of good qualities
- I would enjoy writing a paper on the possible long term effects or outcomes of a significant discovery or contribution in my field of specialization
- Mutual incompatibility should be sufficient grounds for a divorce
- In disarmament negotiations the West should take the initiative by making concessions since such a procedure could produce concessions from the Soviet block
- The use of profane or obscene language by a woman is no more objectionable than the same usage by a man
- I wish I could have more respect for myself
- In the long run, the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own
- The social unrest found in the underdeveloped parts of the world today is due more to the enormous differences in living standards among the people concerned than it is to the work of Communist agitators
- On the whole I am satisfied with myself
- I enjoy tackling problems
- In illegitimate pregnancies, abortion is in many cases the most reasonable alternative
- Of all the different philosophies that exist in the world, there is probably one which is more in accord with reality than any of the others
- I certainly feel useless at times
- I have frequent discussions with friends about the causes and possible solutions of various national and international problems

Use the following key to show how you would rate the importance to you NOW and BEFORE of each of the next statements:

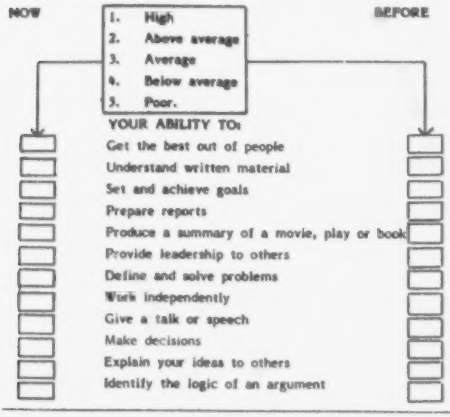
NOW

1 Essential
2 Very important
3 Important
4 Not very important
5 Of no importance

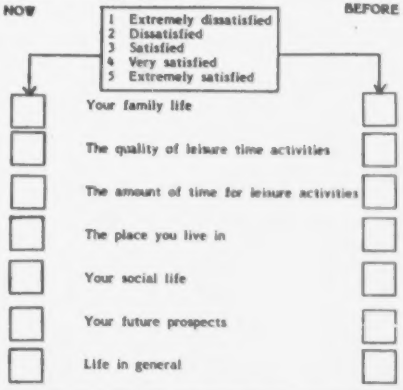
BEFORE

- Being well off financially
- Becoming an authority on a special subject in my field
- Obtaining respect and recognition of my abilities from my family
- Helping others who are in difficulty
- Becoming successful in my job
- Having enough money to travel overseas
- Obtaining recognition from my colleagues
- Being able to contribute to voluntary committees (e.g. school council)
- Receiving a very good salary
- Becoming more effective as a citizen
- Obtaining a senior position at work
- Having enough money to spend on luxuries
- Being a highly principled person
- Being respected for my financial acumen
- Participating in community work

Use the following key to show how you would rate your ability in each of the following NOW and BEFORE.



For the next statements, use the following key to rate how satisfied you are NOW and how satisfied you were BEFORE with the following aspects of your life:



We know questionnaires are limiting and don't allow you to tell the full story, so if you would like to give us more details, please use the space below.

We would like to arrange a short interview with some of those who answered the questionnaire. If you are willing to be interviewed please provide details below of your name, address and a telephone number where you can be contacted.

NAME.....PHONE Day.....Evening.....

ADDRESS.....

.....

VARIABLE	ASPECT	ITEM NO.
Educational and social background	• highest educational level of parents and spouse/partner	4
	• type of school attended	5
	• location of school attended	6
	• first point of contact when returned to study (e.g. high school evening classes)	7
	• educational starting point (e.g. Early leaver)	9
	• method of qualifying for entry	10
	• job-related reason, if any, for entering	11
	• occupation of parents and spouse/partner	27
Course involvement	• field of study	12
	• satisfaction with college/university	13
	• enrolment status	14
	• reason(s) for studying externally	15
	• reason(s) for beginning course part-time	16
	• employment status while enrolled part-time	17
	• reason(s) for changing from full-time to part-time	18
	• reason(s) for changing from part-time to full-time	19
	• progress through course	20, 21
	• time of withdrawal from course	22
	• failure as a factor in withdrawal	23
	• reason(s) for withdrawal	24
	• self rating of academic performance	25
Employment	• occupational level	27
	• reason(s) for being unemployed	28
	• employment sector	29
	• perception of career prospects	30
	• job satisfaction	31,32,33
	• annual income	34
	• helpfulness of course in gaining employment	35
	• usefulness of skills/knowledge gained from study in carrying out job	36
	• extent to which job relates to major field of study	37
	• specific job-related benefits	38
Personal development	• Likert-type scales, with items randomly mixed, measuring (1) intellectual interests (2) dogmatism (3) political economic liberalism (4) social liberalism (5) attitudes towards feminism (6) self esteem (7) financial orientation (8) status needs and (9) altruistic orientation	see last 3 pages
	• self-rated measures of communication skills, academic ability, leadership and life satisfaction	

Social impact	•	influence of undertaking course on marriage/de facto relationship	42
	•	range of leisure time activities	43
	•	marital status	8
Further higher education	•	type of course undertaken	40(a)
	•	progress	40(b)
	•	enrolment status	40(c)
	•	main reason for undertaking	41
Perception of impact	•	most important benefits of having undertaken course	39
	•	perception of major impact of course (open-ended question)	44

APPENDIX 2

A COMPARISON OF AGE SUBSAMPLES

A COMPARISON OF AGE SUBSAMPLES

In this appendix the main conclusions with respect to change are tested separately for the under 30 and 30 and over samples.

Occupational status	Under 30 sample BEFORE %	Under 30 sample NOW %	30 and over sample BEFORE %	30 and over sample NOW %
Upper professional	15.5	36.0	15.0	32.5
Lower professional	31.8	24.7	30.2	28.5
Large employer	2.8	4.4	4.2	6.3
Small employer	4.4	8.4	5.5	6.1
Intermediate non-manual	13.7	7.7	11.9	9.3
Clerical	15.2	3.3	10.3	5.3
Skilled worker	4.8	1.3	2.6	1.5
Semi skilled worker	5.1	1.3	2.6	1.3
Farm worker	0.7	0.9	0.4	0.7
Home duties	6.0	10.9	16.8	8.5
(N)	(685)	(689)	(1558)	(1510)

Conclusion:

Except for differences in the 'home duties' category, which one would expect to be age related, the trends in change are identical.

Job prospects	Under 30 sample BEFORE %	NOW %	30 and over sample BEFORE %	NOW %
Only a job to earn money while deciding what kind of work I really want to do	19.4	5.5	10.3	4.6
A job to earn money for something else	14.1	7.7	20.2	10.3
Only temporary until I can obtain the work I really want	7.6	7.7	7.9	6.9
It has definite career potential	42.1	43.7	36.5	32.4
It realizes my career goals	16.7	35.3	25.2	45.7
(N)	(617)	(595)	(1204)	(1238)

Conclusion:

Although the two groups have different starting positions (again one would expect this to be age related), the changes are nearly identical - for example at the top end the differences in percentages are 18.6 and 20.5 respectively.

Happy in job	Under 30 sample BEFORE %	NOW %	30 and Over sample BEFORE %	NOW %
Most unhappy	6.5	2.9	4.6	3.8
Unhappy	12.8	7.6	11.5	6.8
O.K.	37.4	21.1	36.7	22.5
Happy	32.3	45.3	34.5	41.3
Very happy	11.0	23.1	12.7	25.6
(N)	(693)	(684)	(1549)	(1546)

Conclusion: The changes are virtually identical.

Job satisfaction variables	Under 30 sample BEFORE (Median)	NOW (Median)	Difference	30 and over sample BEFORE (Median)	NOW (Median)	Difference
Dull...Stimulating	4.7	5.2	0.5	4.9	5.3	0.4
Routine...Challenging	4.4	5.2	0.8	4.9	5.4	0.6
Unimportant...Important	5.2	5.8	0.6	5.5	5.9	0.4
Dependent...Responsible	5.4	6.1	0.7	5.7	6.1	0.4
No stress...Highly stressful	4.6	5.2	0.6	4.8	5.1	0.3

Conclusion:

Changes are greater for the under 30 sample than the over 30 sample.

Activities	Under 30 sample (Median)	30 and over sample (Median)
Browsing in libraries/bookshops	1.7	1.7
Reading books	1.8	1.8
Visiting galleries/museums	1.9	1.9
Reading news magazines	1.9	1.9
Dining out	2.1	1.9
Reading daily papers	1.9	1.9
Attending plays	2.0	1.9
Watching non-commercial TV	1.8	1.9
Listening to non-commercial radio	1.9	1.9
Attending concerts	2.1	2.0
Participating in sport	2.1	2.1
Watching sport	2.1	2.1
Listening to commercial radio	2.1	2.2
Watching commercial TV	2.3	2.3
Reading popular magazines and glossies	2.3	2.3

Conclusion:

There are some minor differences, but the patterns are very similar.

OVERALL CONCLUSION:

A report based on either sample would produce identical findings except for the job satisfaction variables, in which the changes are greater for the under 30 sample.

Personal development variables	Under 30 sample BEFORE (Mean)	NOW (Mean)	Difference	30 and over sample BEFORE (Mean)	NOW (Mean)	Difference
Academic interests	24.4	27.6	3.1 (L)	24.7	28.1	3.4 (L)
Intellectual interests	23.9	25.2	1.3 (M)	24.9	26.6	1.7 (M)
Dogmatism	25.6	23.0	-2.6 (L)	25.5	22.8	-2.7 (L)
Political economic liberalism	31.7	32.0	0.3 (S)	30.8	31.4	0.6 (S)
Social liberalism	23.3	23.5	0.3 (S)	21.8	22.7	0.9 (M)
Self esteem	27.7	31.7	4.0 (L)	27.5	31.4	3.9 (L)
Attitude to feminism	26.6	27.9	1.3 (M)	25.9	27.6	1.7 (M)
Financial orientation	15.8	15.8	0.0 (-)*	16.2	16.4	0.2 (S)
Altruistic orientation	15.3	14.1	-1.2 (M)	14.6	14.0	-0.6 (M)
Status orientation	14.9	14.5	-0.5 (S)	15.3	14.8	-0.5 (S)
Communication skills	15.1	11.7	-3.3 (VL)	14.8	11.5	-3.3 (VL)
Academic abilities	8.0	6.2	-1.8 (VL)	7.9	6.2	-1.7 (VL)
Leadership	11.7	9.0	-2.7 (VL)	11.1	9.0	-2.1 (VL)
Life satisfaction	20.9	23.0	2.1 (M)	20.8	23.0	2.1 (M)

(* not significant at 0.05 level)

(S=small change, M=medium change, L=large change, VL=very large change)

Conclusion:

While there are some very minor differences in size, the conclusions about extent of changes are identical.

APPENDIX 3

A COMPARISON OF FIRST YEAR WITHDRAWERS AND GRADUATE SUBSAMPLES

A COMPARISON OF FIRST YEAR WITHDRAWERS AND GRADUATE SUBSAMPLES

In this appendix, the main conclusions with respect to change are tested separately for those who withdrew before the end of first year and those who have graduated.

Occupational status	1st year withdrawers		Graduates	
	BEFORE %	NOW %	BEFORE %	NOW %
Upper professional	12.6	14.0	15.6	47.2
Lower professional	32.4	30.3	31.2	27.1
Large employer	6.8	7.2	2.9	24.4
Small employer	6.3	10.4	4.7	5.0
Intermediate non-manual	16.2	12.7	10.8	5.1
Clerical	7.2	7.7	11.7	2.6
Skilled worker	4.1	3.6	3.1	0.6
Semi-skilled worker	3.2	1.4	3.9	0.9
Farm worker	-	-	0.5	0.7
Home duties	11.3	12.7	15.4	6.5
(N)	(222)	(221)	(1192)	(1186)

Conclusion:

The changes in occupational status are insignificant for first year withdrawers in comparison to graduates.

Job prospects	1st year withdrawers		Graduates	
	BEFORE %	NOW %	BEFORE %	NOW %
Only a job to earn money while deciding what kind of work I really want to do	17.6	4.9	14.5	3.8
A job to earn money for something else	14.9	14.3	16.3	5.5
Only temporary until I can obtain the work I really want	7.4	7.1	8.6	7.6
It has definite career potential	35.6	32.4	39.8	38.9
It realizes my career goals	24.5	41.2	20.9	44.2
(N)	(188)	(182)	(958)	(1024)

Conclusion:

Both groups have moved substantially. The move for graduates is greater.

Happy in job	1st year withdrawers		Graduates	
	BEFORE %	NOW %	BEFORE %	NOW %
Most unhappy	7.8	3.3	4.9	2.9
Unhappy	11.5	5.2	12.3	7.1
O.K.	31.2	26.1	13.8	19.5
Happy	32.1	43.6	33.7	43.6
Very happy	17.4	21.8	11.3	26.9
(N)	(218)	(208)	(1191)	(1173)

Conclusion:

The change in overall job satisfaction is greater for graduates than for first year withdrawers.

Job satisfaction variables	1st year withdrawers BEFORE (Median)	NOW (Median)	Difference	Graduates BEFORE (Median)	NOW (Median)	Difference
Dull...Stimulating	4.9	5.2	0.3	4.8	5.4	0.6
Routine...Challenging	4.9	5.3	0.4	4.6	5.5	0.9
Unimportant...Important	5.8	5.9	0.1	5.3	5.9	0.5
Dependent...Responsible	6.1	6.4	0.3	5.5	6.1	0.6
No stress...Highly stressful	5.1	5.1	0.0	4.7	5.1	0.5

Conclusion:

In every case the change is greater for graduates than for first year withdrawers.

Personal development variables	1st year withdrawers BEFORE (Mean)	NOW (Mean)	Difference		Graduates BEFORE (Mean)	NOW (Mean)	Difference	
Academic interests	25.2	26.8	1.6	(L)	24.6	28.6	4.0	(L)
Intellectual interests	25.1	25.7	0.5	(M)	24.5	26.4	1.9	(M)
Dogmatism	24.8	23.4	-1.4	(M)	25.6	22.6	-3.0	(L)
Political economic liberalism	30.2	30.3	0.0	(-)*	31.5	32.2	0.7	(S)
Social liberalism	20.0	22.3	0.3	(S)*	22.4	23.2	0.8	(M)
Self esteem	27.9	30.6	2.7	(L)	27.5	31.9	4.4	(VL)
Attitude to feminism	25.9	26.7	0.8	(S)	26.3	28.1	1.8	(M)
Financial orientation	16.1	16.2	-0.1	(S)*	16.2	16.2	0.0	(-)*
Altruistic orientation	14.6	13.6	-1.0	(M)	14.8	14.0	-0.8	(M)
Status orientation	15.0	14.8	-0.1	(S)*	15.2	14.4	-0.8	(S)
Communication skills	14.8	12.9	-1.9	(M)	14.9	11.1	-3.8	(VL)
Academic abilities	7.9	6.7	-1.2	(M)	7.9	5.9	-1.9	(VL)
Leadership	11.2	9.5	-1.7	(M)	11.2	8.8	-2.4	(VL)
Life satisfaction	21.3	23.0	1.7	(M)	20.9	23.2	2.3	(M)
(N)		(227)				(1239)		

(* not significant at 0.05 level)

(S=small change, M=medium change, L=large change, VL=very large change)

Conclusion:

In absolute values, the difference between means is always greater for the graduates than first year withdrawers. In terms of the operational definition of extent of change, in 10 out of 14 variables the change category is higher for graduates than first year withdrawers.

Activities	1st year withdrawers (Median)	Graduates (Median)
Browsing in libraries/bookshops	1.9	1.6
Reading books	1.8	1.8
Visiting galleries/museums	1.9	1.9
Reading news magazines	1.9	1.9
Dining out	1.9	1.9
Reading daily papers	1.9	1.9
Attending plays	2.0	2.0
Watching non-commercial TV	1.8	1.9
Listening to non-commercial radio	1.8	1.9
Attending concerts	2.0	2.0
Participating in sport	2.1	2.1
Watching sport	2.1	2.1
Listening to commercial radio	2.1	2.2
Watching commercial TV	2.3	2.3
Reading popular magazines and glossies	2.2	2.3

Conclusion:

In general the reported changes in leisure time activities are similar.

OVERALL CONCLUSION:

Apart from leisure time activities, changes are greater for the group who have graduated than they are for the group who withdrew in the first year.

APPENDIX 4

A SHORT NOTE ON STATISTICAL SIGNIFICANCE

A SHORT NOTE ON STATISTICAL SIGNIFICANCE

Throughout this report, few tests of statistical significance are quoted. The reason for this is that the sample size is large enough to observe quite small effects; but the effects observed are very large. We have adopted the practice of noting those changes which are not statistically significant rather than the reverse. In Chapter 5, where we are able to use parametric statistics, we have operationally defined various effect sizes (small, medium, large, very large) as a useful way of classifying the observed changes. In Chapter 4, where we deal mainly with frequency distributions, we have decided to allow the figures to be judged by the reader (what has sometimes been called the Inter-ocular Traumatic Test).

Changes in ordered distributions are best observed in the top or bottom categories, since movement from a lower category can often compensate for movements upwards, so that an intermediate category can show little change in frequency. We considered using the ratio of numbers in the top to bottom category, and also the median and its standard error as analogues of the effect sizes used in Chapter 5. However some of the distributions are only partially ordered (e.g. occupational level is ordered except for the 'home duties' category), so we could not have devised a consistent measure as we have in Chapter 5. In the end, we considered that the magnitude of changes could best be judged from the frequency distributions themselves. Occasionally, as a form of data reduction, we have used medians.

One might infer from the above that, for the measurement of change, the sample size is unnecessarily large. Post hoc, that is so. We were surprised by the size of the changes observed. The original sample size was based on obtaining representativeness in a national sample. With the benefit of hindsight it is clear that we could have taken a proportional sample at each institution and

still observed the kinds of changes that have occurred. The benefits of the over sampling are that we can feel confident about the reliability of the estimates, and that smaller group comparisons (state versus state, or even institution versus institution) are possible with the data set.

APPENDIX 5

MICROFICHES

(see envelope on inside back cover)